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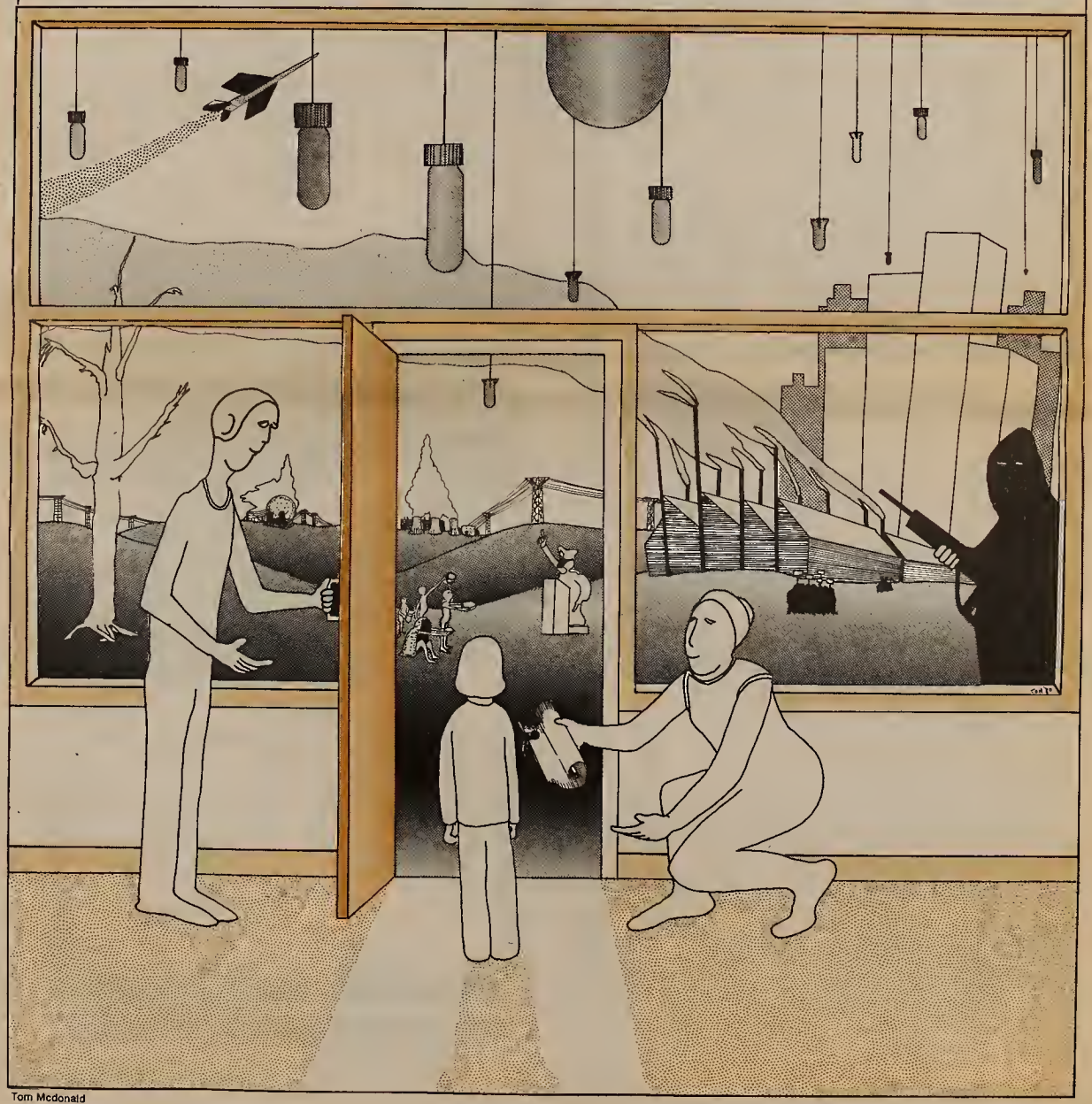

Tom Mcdonald

CAUT Bulletin

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LETTERS LETTRES

Some serious inadequacies

In the December issue of the *CAUT Bulletin*, Lorraine Boyd Eden reported on a study of faculty salaries at Mount Saint Vincent University, Halifax, Nova Scotia. Recently, I completed a similar study for Concordia University and was most delighted to see that CAUT published the summary of her study.

However, there are some serious inadequacies in the model specification used by Boyd Eden and in her use of econometric techniques. These shortcomings lead me to question the validity of her results and the conclusions which she reaches based on these results.

First, let us consider the model which she specifies.

Boyd Eden specifies a salary model which could be improved upon considerably. I am most curious to know why she did not use a conventional post-school human capital earnings function in which the *natural logarithm* of salary is related in a linear fashion to the set of predictors she suggests. A log linear form of the earnings function is preferred for several reasons. First, it conforms more closely to the human capital approach to earnings determination. This approach suggests that there is a *proportionate* return to earnings from investments in human capital (e.g. schooling, "on the job training") rather than a constant dollar return. In an earnings distribution context relative or percentage deviations are surely more interesting than dollar differences. Secondly, a log-linear form allows for implicit interaction between the variables whereas in a linear form such interaction must be specified explicitly. In a log-linear form the effect of a given explanatory variable on the dependent variable depends upon the values of all the explanatory variables. Hence, the log-linear form minimizes the need for interaction terms. I am sure that Boyd Eden would agree that, for example, interacting the sex variable with "Division" would be of interest.

Third, the linear model which Boyd Eden uses does not deal adequately with the problem of heteroskedasticity which is endemic in cross section studies. By using a linear specification of the earnings function, Boyd Eden assumes that the variance of the stochastic error term is constant. Perhaps, in her study this is so, but given her results I doubt it. A log-linear form very often reduces heteroskedasticity. Boyd Eden nowhere indicates that she has even attempted to detect heteroskedasticity either by examining the residuals or by using, say a Golfeld-Quandt test.

Given the predictors of salary which she uses, it would be appropriate if she would test for the presence of heteroskedasticity. If in fact the assumption of homoskedasticity is not valid, the calculated confidence intervals and acceptance regions of her coefficients are incorrect.

I am also puzzled by the manner in which she uses and defines her predictor variables. First, I agree completely with exclusion of academic rank as a predictor of salary for the reasons cited by Boyd Eden.

A serious error, however, is the manner in which Boyd Eden defines the dummy or categorical variables for FYSTAT. The general purpose in using categorical variables is to ascertain whether or not a certain qualitative attribute has an effect on the dependent variable. A dummy variable is usually defined in terms (0,1)—1 implying that the attribute is present, and 0 that it is not present. It makes little sense to set Bachelors = 0, Masters = 1 and Doctorate =2. Holding other considerations constant, this predetermines that the holder of a doctorate is rewarded at twice the rate of an individual who holds an M.A. I doubt that this is the case.

Instead, Boyd Eden should have chosen a reference category (e.g. Bachelors) and then introduced two dummy variables in her equation — i) masters = 1; 0 otherwise, ii) doctorate = 1; 0 otherwise. She used the dummy variable technique correctly for Sex, Division and CHGSTAT.

The other minor criticism which I have is the introduction of 3 quadratic terms — CONYRSQ, PRIORPTSQ, and PRIOROTHSQ. I suspect one quadratic term — total experience squared would have sufficed.

In concluding, I am glad that Boyd Eden has drawn to the attention of CAUT and its members the need for a set of on going empirical studies of faculty salaries at Canadian Universities. However, I am suspicious of her results and her conclusions because of the inadequacies cited above. Since she has an excellent data base to work with, I would suggest that she re-run her regressions with the above comments in mind.

Yours very truly,
M. Stelcner
Associate Professor
Department of Economics
Concordia University

Professor Eden responds

I am pleased to be offered the opportunity to reply to Professor Stelcner's letter concerning my study of MSVU faculty salaries (*CAUT Bulletin*, Dec. 1979). I agree with some of his criticisms but must take exception to certain others.

Perhaps the most serious of his criticisms is that a log-linear function should have been used to predict salaries. I used the simple linear form instead because the main purpose of my study was to examine the MSVU salary structure for evidence of salary inequities — either due to sex differences or to market differentials. The most common method used to estimate salary inequities in Canadian and U.S. universities has been the multiple linear regression model. The A.A.U.P. has published a *Higher Education Salary Evaluation Kit* by Elizabeth L. Scott which compares the results and costs of estimating salary inequities by several methods including the linear and the log-linear models. Ms. Scott found "no striking advantage to using a multiplicative model based on the adjusted R^2 and the standard deviation alone" and that the values for the salary residuals in the log-linear model "tend to

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A Science Council of Canada report

University Research in Jeopardy: The Threat of Declining Enrolment

"Of immediate concern to this Report...is the examination of the consequences of the decline in the number of young people of university age, which will arise after 1982. The stage will then be set for a series of events which, taken together, could very well cause irreparable damage to the quality and effectiveness of university research in science and engineering. But the crisis will not be confined to these areas; it will be felt throughout the universities, in all disciplines and in both teaching and research.

"...Any decline in the quality or relevance of teaching and research could lead to a major decrease in the participation rate, with our young people either turning away from higher education or seeking it outside Canada. The universities would then be faced with problems many times more severe than those created by demographic change alone. Furthermore, the impact would not be confined to the universities. Grave consequences for Canadian society as a whole would follow if the educational clock were to be turned back. The complex scientific, technological, and economic problems of the future cannot be met using second-rate institutions to generate new concepts and to train the manpower required."

by Helen Baxter

This is the gloomy scenario painted by the Science Council of Canada in its recent report *University Research in Jeopardy: The Threat of Declining Enrolment.*

The Council bases its predictions on demographic projections indicating a drop of over 20 per cent in the size of the 18-24 age group — to which over 80 per cent of university students belong — between 1982 and 1994.

The decrease in the number of students attending university will lead to a reduction in operating funds provided by the provinces, which at present are based explicitly or implicitly on the number of students enrolled. As well, the demand for new staff will fall off and universities will be deprived of the services of many highly qualified young faculty. The calibre of teaching and research will suffer as a result leading to a further decrease in the participation rate. To complicate matters, there will be an abrupt demand for new staff in the mid-nineties, due to large numbers of staff reaching retirement age and a simultaneous increase in enrolment as children of the baby boom generation reach university age. With a shortage of young people qualified to teach and carry on research, Canada will be ill-prepared to meet that demand and will be forced to hire large numbers of faculty from outside Canada.

This vicious chain of events can be broken, says the Science Council, if the universities, the provincial governments, and federal agencies seek creative solutions to the problems.

The Universities

The Science Council strongly urges the universities themselves to take the leadership role in this regard.

"Unless they show leadership and imagination in facing the demographic challenge", the report states, "the universities are not likely to receive very much consideration from government.

The report advances several options for the universities. Focusing on the crucial importance of increasing the participation rate at universities, it recommends a greater turnover of academic staff in order to ensure that the quality of teaching and research is maintained. To this end, it strongly advocates a major study on the magnitude and nature of the turnover of academic staff. The study would be carried out by the Association of Universities and Colleges of Canada in collaboration with the CAUT, and would be financed by the federal government.

In the interests of economy and good scholarship, the report further recommends inter-university transfers of staff and facilities wherever research and teaching in a specialized area falls below the "critical mass" for productive scholarship in a particular university. As an alternative, the report proposes that universities in adjacent centres develop joint graduate programs in appropriate disciplines.

The government

With regard to the government's role, the Science Council stresses the necessity of coordinated action on the part of the two senior levels of government to achieve national and provincial research objectives. The Council recommends that the provincial governments, in addition to offering general university support, take a more active role in supporting research. Up to the present, direct support of research has been left almost entirely to the federal government. The report specifically proposes that the provinces establish research chairs in their universities in disciplines or subdisciplines with particular relevance to provincial responsibilities and priorities.

Further, to prepare for the anticipated increase in enrolment in the mid-nineties, the report recommends that the provinces take a flexible attitude toward faculty/student ratios so that the universities can continue to hire young people and establish a sound age structure.

At the same time, the Council says that the major responsibility for the direct support of research should continue to lie with the federal granting agencies. To ensure a continuous flow of new researchers, the Council strongly supports the concept of separating research and teaching manpower. Acknowledging that the Medical Research Council (MRC) has already made considerable progress in this area through its Career Investigatorships and Scholarship program, the report recommends that the Natural Sciences and Engineering Research Council (NSERC) institute a program of Research Associateships along the lines of the MRC Scholarships. The Associateships would be awarded on a highly selective basis and tenable in Canadian universities for up to five years.

Industry

Finally, the report stresses the importance of basic research carried out by universities as opposed to the applied research conducted by the private sector and government, which typically deals with specific shorter term problems (see extract on page 4 from *University Research in Jeopardy).* The integrity of basic research in science and engineering must be preserved, says the report, but emphasis must also be placed on mechanisms for achieving spin-off to Canadian industry. For this, applied scientists in universities must gain first hand knowledge of the industrial sector. The Council recommends that NSERC expand by a factor of ten its Senior Industrial Fellowship Program, which allows staff members of Canadian universities to spend a minimum period of one year with industrial organizations. The report notes that the major impediment to the program in the past has been the generally negative attitude of the universities themselves. It encourages recognition on the part of universities of the potential for making significant contributions to industrial performance as well as stimulating the most important market for their graduates.

To further promote a better correlation between university research and Canadian industry, the report recommends that NSERC at least double the present size of its Industrial Postdoctoral Fellowship Program through a campaign to expand the number and types of participating companies.

Seminar dissects report

In order to stimulate discussion of the proposals advanced in the report, the Science Council held a seminar in Ottawa on April 2. Representatives of the CAUT, AUCC, the three federal granting councils, the Council of Ministers of Education and the Science Council sat on the panel. Those attending included members of the academic community, scientific associations including the Royal Society of Canada, SCITEC, the Canadian Federation of Biological Societies, and the Canadian Association of Physicists, and representatives of the federal and provincial governments and the press.

Dr. A.N. Bourns represented the AUCC on the panel. Dr. Bourns commended the Science Council for its "penetrating analysis" of the problems faced by universities, particularly the difficulty of sustaining a strong research base if funds continue to be based on student enrolment. However, he said there were serious problems in implementing the proposals advanced by the Council in its report. He cited as an example the "critical mass" proposal for interuniversity transfers of staff and facilities as highly desirable but extremely difficult to implement due to the inevitable resistance of smaller universities. Such a policy would "make the strong stronger and the weak weaker", he observed.

Dr. Bourns did agree to the Council's recommendation for a study on the turnover of academic staff to be carried out by the AUCC and the CAUT, but not as a high priority or as an expensive project since much of the data was already available.

He made particular reference to the lack of recognition on the part of decision makers of the relationship between the granting councils and the provincial governments. Co-operation between the two levels of government is absolutely essential, and their partnership must be recognized in concrete terms, he said.

Dr. Donald Savage, the Executive Secretary of the CAUT, pointed to the anomalous situation in which the federal government was not committed to an increase in research and development just at the moment when the provinces seemed intent to run down the university system as a consequence of formulas based on student enrolment. This was, he said, particularly marked in Manitoba, Ontario and in the Maritime provinces. He stressed the need for effective federal/provincial co-operation.

CAUT supports mobility study

In regard to specific matters in the report, he indicated that CAUT would seriously consider the proposition of an inquiry into mobility and that it had supported the notion of pension portability for a quarter of a century without much support from the university presidents. He pointed to Alberta as the best pension system in Canada at the moment and suggested that the current discussions between OCUFA and COU in Ontario would be a good test of the university presidents' good faith in this matter.

He also questioned the assumption that research productivity declined with age. On the question of the creation of research fellows, he indicated that proposals to increase the research component of the universities by several hundred researchers would surely be welcomed by the community provided that the contractual position of the fellows was made clear in advance. Were they to be university employees and would they be treated in the same manner as other faculty except where it was

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Frank & Ernest

manifestly impossible to do so?

The same point was equally valid for co-operative graduate programmes between universities. There was no point in complaining about obstructionism by the faculty if no one consulted their representatives before launching such schemes, Dr. Savage said.

Gilles Julien, Executive Director of NSERC, expressed full support of the Science Council's recommendations which closely followed those put forth in NSERC's recent five-year plan.

However, Mr. Julien questioned the "shaky assumptions and large uncertainties" on which the report is based. As to demographic considerations, he pointed out that the only firm fact is the total number of live births in Canada, the rest being "uncertain speculation". He also questioned the assumption that the student/teacher ratio at universities will remain constant, that productivity in research will necessarily decline with reduced numbers, and, particularly, that age is a factor in productivity. Mr. Julien said that productivity does not decline with age and that older researchers are actually capable of increased output — a view reiterated by a number of seminar participants.

Mr. Julien said the real problem facing universities is potentially excellent researchers turning away from university. To prevent this, he said, measures, such as those recommended by the Science Council and NSERC, must be taken to attract "the best and the brightest."

Don Ogaranko represented the Council of Ministers of Education on the panel. In his address, Mr. Ogaranko stated that the provinces are becoming increasingly aware of the importance of research and development and the vital role universities can play in helping to solve economic problems at the provincial level. For this reason, he anticipated an increase in granting scholarships in areas of provincial concern and in more mission-oriented research being carried out by the universities.

Mr. Ogaranko down-played the sense of urgency expressed in the report. He said that the decline in enrolment at universities need not lead to a decline in the participation rate.

"Neither universities nor university research is in jeopardy," Mr. Ogaranko said.

André Fortier, President of the Social Sciences and Humanities Research Council, decried the report's emphasis on science and technology at the expense of the human sciences.

Calling for increased support of the human sciences, Mr. Fortier backed up his argument with statistics indicating a marked inequality in research funding for the social sciences as compared to the natural sciences.

He made a strong appeal for a link between development in the natural sciences and human sciences "so that through the interaction we could...avoid the disastrous deviations in societal value systems occasioned by incoherent technological development."

The Saskatchewan Minister of Education, D.F. McArthur made summary remarks to the panel discussion.

Mr. McArthur predicted a marked transformation in the university sector in the years ahead. In the past, the university system has been built on the assumption of growth based on student-driven formulas, with the universities "piggy-backing" research funding on enrolment figures. In view of societal changes, the universities must now make plans for structural adjustments before seeking funding and must put these plans to government in a coherent and plausible way, he said.

Mr. McArthur stressed that the universities were part of the public sector and that the widespread attack on public spending was bound to affect the universities as well as all other public institutions unless it was resisted. He pointed out that the private sector, notably the multinational corporations, had not invested in research and development but that the government of Saskatchewan was using the instrument of public control to ensure that nationalized corporations under-took the type of research which private companies had to date refused to do.

He also favoured the continuing pre-eminence of the federal government in the field of research but argued that the provinces would and could undertake more applied and immediate types of research. He thought that there should be co-operation between the two levels of government and expected that the only practical way of doing this would be through bilateral arrangements between the federal government and each province.

A number of points were raised in the discussion which followed. In particular, there was much argument over the question of participation rates — should it be assumed to be constant or even dropping when it was not at the same level as in the United States? Was it not different in various parts of the country?

Dean Leffek of Dalhousie University, President of the Canadian Association of Graduate Schools, praised the suggestion of the CAUT for a registered educational leave plan similar to the RHOSP now in existence.

Dr. M. Kristjanson of the AUCC questioned the assumption that a single centre of excellence with, say, thirty people was necessarily better than three with ten people. He thought that the latter arrangement might stimulate new ideas more readily.

The major part of the discussion, however, revolved around the need to ensure the co-operation of the two levels of governments, to make certain that as federal support increased, the provinces did not decrease their contribution, and to use precious dollars to deliver research rather than political posturing.

The universities have often been criticized for giving too much attention to "unoriented" ur "curiosity-uriented" research,end not enough to the solution of practical problems. Such criticism is largely unwerranted. The implicatiun is that hasic research is uncoordinated and is cerried un by dilettentes, generously supported by public funds. Fer from being uncoordinated, good basic research is extremely well coordinated; not by some overall authority, but more effectively by the discipline of the scientific method. Research findings must be accepted for publication by internetionel scientific journels end must be exposed to criticism by scientists end engineers working in the seme field throughout the world. In this wey, experimentel results cen be checked, theories confirmed or rejected, and new knowledge and principles established. Although this kind of research is not undertaken primarily for possible practical applicetion, epplied laboratories around the world ere dependent on the literature of basic research, both for relieble dete end for the letest information on the stele of knowledge.

In many university departments, the neture of research is said to be epplied because of its close connection with problems of direct concern to industry or the wealth-producing sector in generel. This is particularly true in feculties such as engineering, forestry end agriculture. But even here much of the research is basic in the sense that it is concerned with knowledge and methods thet might be applied in a number of different situations. This fector provides the strength end versetility thet differentiates applied ecedemic research from epplied reseerch in industry, where the objectives are usuelly highly specific. To meintein the heelth end cepebilities of university research in the applied sciences, the people involved must continue to have the freedom to undertake research of e general and longer term nature and not be restricted to the specific, shorter term problems of the private sector or government.

—UNIVERSITY RESEARCH IN JEOPARDY

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CORRECTION

Please note that, in the table on **Provincial Grants** published in the April *Bulletin* (Vol. 27, no. 2, page 14), there is an error in the province of Ontario figures. For the year 1979-1980, the capital grant for colleges and universities was $26,600,000 and not $266,000,000.

Redundancy, science policy, status of women academics, and censure considered by CAUT

The CAUT Board, at its March 21-22 meeting in Ottawa, considered a draft policy statement on redundancy and recommended its approval by the CAUT Council. The Board drew a distinction between a major financial crisis for a university, which might result in lay-offs provided proper procedures were followed, and a decision to eliminate programmes for other than financial reasons. In the latter case, it insisted that no lay-offs should take place but that the highly qualified manpower involved should be redeployed or retrained. The Board was informed that there would be a major discussion of cutback policy at the CAUT annual Council on May 14 and 15 in Ottawa to be followed by the publication of a series of position papers and documents on this problem.

The Board met with Dr. D.J. Le Roy of the Science Council of Canada for a discussion of the Council's paper, *University Research in Jeopardy*. The Board agreed with Dr. Le Roy that university research is indeed imperilled and that, if steps are not taken to deal with the situation, there will be a serious decline in research capacity in the eighties since the universities provide a major part of the research capability of the country. The Board expressed some disagreement with one of the assumptions of the report, namely that research skills were necessarily age related.

The Board recommended that the first stage of censure be imposed on Nova Scotia Technical College for the firing of a tenured professor without a hearing of the charges before a properly constituted arbitration board. It also heard a report from the Academic Freedom and Tenure Committee that no progress had been made in resolving the contractual dispute concerning a professor in the School of Social Work at Memorial University. As a consequence, it recommended to Council that CAUT proceed to the third stage of censure, which will involve members being advised not to take posts at Memorial University. Both of these decisions must be ratified by the May Council of CAUT. In addition, it was reported to the Board that censure should soon be lifted at Moncton where the university had agreed to an arbitration of the case in dispute and the arbitrators had submitted their report. As soon as the award is implemented, the censure will be removed.

The Board considered the recommendations of the Adams Commission of the federal government concerning educational leave policies in Canada. It reiterated its support of the idea of a registered educational savings plan as a means of encouraging taxpayers to save for educational leave, in a manner similar to the current provisions of the income tax act which allow tax free saving for home ownership. This idea was supported by the Adams Commission and the Board indicated that CAUT should give emphasis in its lobbying for this type of plan.

The Board recommended to the CAUT Council the creation of a Status of Women Committee to represent the interests of women academics. A number of Board members expressed grave concern that the financial difficulties of the universities would cause a decline in the employment of women academics. It was generally considered that this committee would help ensure that CAUT maintain a vigilant position in defence of women academics within Canadian universities.

The Board recommended changes in its Policy Statement on Academic Freedom and Tenure to ensure that there was an explicit requirement for universities to warn academic staff members of unsatisfactory performance sufficiently far in advance of punitive action, so that they could reasonably take steps to correct problems and difficulties.

The Board voted to protest the treatment of Dr. Andrei Sakharov and to urge the Russian Academy of Sciences to do the same and to protect one of its most distinguished scientific members.

The Board endorsed the efforts of the Humanities Federation of Canada to secure funding for the Rome Centre which assists Canadian researchers in Italy and agreed to appoint a representative to the steering committee of the Federation charged with fund-raising.

CAUT Board recommends third stage of censure be imposed on Memorial

The Board of the Canadian Association of University Teachers has recommended that the third stage of censure be imposed on the President and the Board of Regents of Memorial University of Newfoundland. Under this stage faculty members will be advised not to take appointments at the university. Censure at the third stage will be advertised in the United States, Europe and elsewhere in the Commonwealth.

The recommendation will be considered by the CAUT Council when it meets in May.

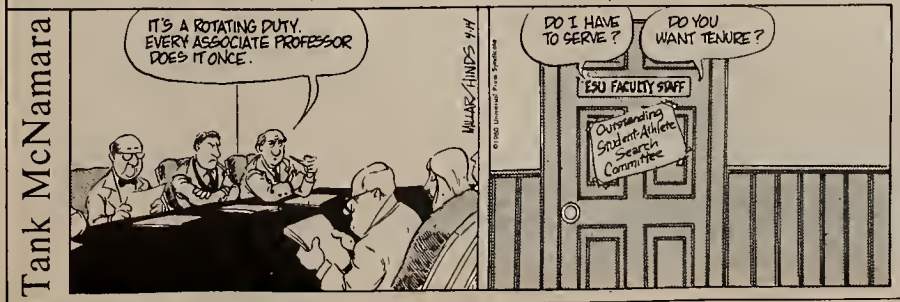
Censure at the third stage is the most serious sanction which the academic community is able to take against a university. It indicates the view that conditions for the full protection of academic freedom do not exist at Memorial.

The decision to recommend the third stage of censure to the CAUT Council was taken because the breakdown of discussions with the university administration indicated that there would be no immediate correction of the abuses which led to censure.

The decision to place the university administration under censure was taken by the CAUT Council in May, 1979 following the university decision not to renew the appointment of Professor Marlene Webber in the School of Social Work because of her professed Marxist-Leninist views and her alleged use of the classroom to disseminate these political views.

The action of the CAUT Council was based on the findings of a committee of inquiry chaired by Professor Brough McPherson, a distinguished faculty member at the University of Toronto. The committee found that the charges against Professor Webber were unsubstantiated, that she had in fact alerted students to her political beliefs, and had made a serious effort to present a balanced political perspective. The committee concluded that her activities and actions were not unprofessional.

The Board of Accreditation of the Canadian Association of Schools of Social Work gave implicit support to the CAUT censure in November 1979 when it gave notice that the accreditation of the Bachelor of Social Work program at Memorial will be withdrawn unless the Board is satisfied that the policy of the school and the university with respect to discrimination on grounds of political belief has been changed.


Tank McNamara
IT'S A ROTATING DUTY. EVERY ASSOCIATE PROFESSOR DOES IT ONCE.
DO I HAVE TO SERVE?
DO YOU WANT TENURE?
ESU FACULTY STAFF
Outstanding Student-Athlete Search Committee
WILLARD/HINDS 4/4

CAUT BULLETIN

Special advertising edition — June '80

Due to requests from several of our member universities, the CAUT will be publishing, on a trial basis, a special edition of the *CAUT Bulletin* devoted primarily to advertising. This summer edition of the *Bulletin* will be in addition to the six regular issues which appear at the first of September, October, December, February, April and May.

The summer edition is scheduled for publication in mid-June.

The deadline for receipt of advertisements for this issue is May 20.

We hope that many of our member universities will find that this special advertising edition of the *Bulletin* provides a useful service and that we will be able to provide it on a continuing basis in future.

University faculty and staff support refugees from Southeast Asia

Faculty members across the country have joined many other Canadians in providing support for refugees from Southeast Asia. Refugee sponsoring groups have been established at the following universities: Laurentian, Brock, Calgary, Moncton, Saint-Paul and Manitoba. The groups are composed of members of both faculty and support staff. Refugee families have either been received or are expected shortly. The faculty associations at the universities have generally facilitated the organization of the sponsoring groups but are not directly involved.

Sponsoring groups are responsible for providing accommodation, food, clothing and social support for the refugee family for one year following their arrival in Canada. It is usual, however, for refugees to become self-supporting before then.

At the University of Montreal the faculty union made a direct and substantial contribution to a sponsoring group in the parish which adjoins the University and a refugee family arrived in the late fall of 1979.

Only the sponsoring group at the University of Calgary is directly affiliated with the CAUT Refugee Foundation in order to qualify for tax-deductible charitable status. Other sponsoring groups have chosen to affiliate with refugee organizations in their own communities.

Direct contributions to the CAUT Refugee Foundation have been received from the Athabasca University Faculty Association and from several of its members.

A Vietnamese family arrived in Ottawa on January 22, 1980 under the sponsorship of the Universities Group for Refugees, a group composed of members of the central office staffs of CAUT, AUCC, OCUFA, the Social Science Federation and the Canadian Research Institute for the Advancement of Women.

Faculty associations and individuals are urged to consider making a contribution to the CAUT Refugee Foundation. Cheques should be made out to the Foundation and sent to CAUT marked for the attention of the Executive Secretary.

BARGAINING TALK
NÉGOCIONS

by Ted Bartley (CAUT Collective Bargaining Officer)

Arrangements are proceeding smoothly for the third annual CAUT NATIONAL BARGAINING CONFERENCE. It will again be held at the Nottawasaga Inn, Alliston, Ontario, and will commence Thursday evening, September 4 and end Sunday afternoon, September 7.

As has been the case for the past two years, a collective bargaining simulation will be run which will allow participants to negotiate an agreement as a member of either the Association or Board of Governors bargaining team. Workshop topics suggested to date include grievance handling, discrimination and collective bargaining, the legal status of tenure, conciliation, bargaining strategies, contract proposal writing and alternatives to lay-offs. Suggestions for additional topics should be forwarded as soon as possible to either Susan Feldman or Ron Levesque at the CAUT central office.

Individual members wishing to attend should contact their local association executive for further details. Two places for each association have been reserved until May 16. After that time, reservations will be accepted on a "first come" basis.

On March 28, 1980, the DALHOUSIE FACULTY ASSOCIATION signed the first separate collective agreement for a unit of Instructors represented by a faculty association. Until this time, the members of this unit were hired on a year to year basis, had no status as academic staff, no salary scales and no evaluation or grievance procedures. All these areas have now been addressed in this first contract which will expire in 1981...The CAUT DEFENCE FUND ratified two new members at its meeting in Toronto in April. The ONTARIO INSTITUTE FOR STUDIES IN EDUCATION FACULTY ASSOCIATION and the ASSOCIATION OF UNIVERSITY OF NEW BRUNSWICK TEACHERS became the eleventh and twelfth CAUT affiliates to join the DEFENCE FUND. This brings individual membership to nearly 6,000.

A particularly protracted and contentious dismissal for cause proceeding at CARLETON has been resolved by agreement of the parties concerned. With the assistance of a jointly appointed mediator, proceedings were terminated without prejudice to either party, and the faculty member was reinstated to his full-time tenured position in the School of Social Work. The agreement further provided that should the President decide to convene another hearing into the matter, he must do so by November 1, 1981, and confine the inquiry to performance during the intervening period. The use of a mediator in the context of contract administration represents an interesting innovation which might be used constructively in other cases as well.

CAUT Board recommends censure of Nova Scotia Technical College

The Board of the Canadian Association of University Teachers has taken another step toward the censure of Nova Scotia Technical College in Halifax over the dismissal of Professor John Goodfellow, a tenured professor of mathematics. Meeting in Ottawa on March 21-22 the Board approved the following motion:

Whereas it is well-established practice in the Canadian academic community that a tenured appointment will not be terminated except for cause as established before an independent board of arbitration;

And whereas Professor John Goodfellow held a tenured appointment at Nova Scotia Technical College;

And whereas The President and Board of Governors of Nova Scotia Technical College dismissed Professor Goodfellow from the college without specifying the reasons for doing so;

And whereas the dismissal procedures in the college do not conform to those which have now been adopted in most degree-granting institutions or to the CAUT guidelines concerning dismissal for cause;

And whereas the college administration has repeatedly declined to reinstate Professor Goodfellow pending agreement on the application of appropriate procedures to determine whether Professor Goodfellow should be dismissed;

And whereas the President and Board of Governors have refused repeated requests to submit the dispute to binding arbitration;

Be it resolved that the Board recommend to Council that the first stage of censure be imposed on the President and Board of Governors of Nova Scotia Technical College.

If this recommendation is accepted by the CAUT Council at its May meeting censure at the first stage will be imposed on the college.

Professor Goodfellow was fired in October, 1979. No reasons were given by the college administration. His dismissal was in violation of CAUT guidelines which require that sufficient cause to dismiss a tenured faculty member be demonstrated before a duly constituted board of arbitration.

Dismissal procedures similar to those used at most other Canadian universities are not available to faculty members at Nova Scotia Tech. All faculty members are thus subject to the arbitrary authority of the Board of Governors. In such an environment academic freedom is in serious jeopardy.

The college faculty association has recently been certified by the Nova Scotia Labour Relations Board and negotiations will begin shortly on a first collective agreement.

marine sciences research laboratory

AVAILABLE

AQUATIC RESEARCH FACILITIES

Marine Sciences Research Laboratory

Memorial University of Newfoundland

The MSRL is a major aquatic research facility funded in part by the Natural Sciences and Engineering Research Council (NSERC). Scientists funded by NSERC are welcome to use the facilities free of charge. Full range of water salinity and temperature can be arranged. Administrative staff will be pleased to arrange purchase of consumable supplies at cost. There are modest charges to obtain live experimental animals. Visitors are welcome to use equipment, which includes scintillation spectrometers, GLC/MS,. strip scanner for radioactivity, spectrophotometers, fluorimeter, items for histology and immunofluorescence, various items for chromalography, a dark room, and diving support services.

Please enquire about equipment not mentioned above. The only requirement is that the unique facilities of the MSRL are necessary to conduct the research. Write to Dr. D.R. Idler, Director, giving details of facilities required and nature of research.

Hans Küng under fire

Tom McDonald

Separating theological issues

"Does anyone in the Church have the right and duty to say: "Stop there. This teaching is erroneous ... ?"

by G. Emmett Cardinal Carter

Reprinted from the Globe and Mail with the permission of the author.

The condemnation of certain theological opinions of Hans Kung has aroused bitterness and controversy, not all of it expressed in weighty or weighted terms. It would appear to be important to try to examine and separate the issues with a little more light and considerably less heat.

The first issue which, to my way of thinking, requires calm reflection and self-analysis as well as objective analysis is one's position on the rights and responsibilities of the "magisterium," the official teaching authority within the Catholic Church. The knee-jerk reaction of some leads one to wonder about just what rights could be invested in such an authority without arousing an equal and indignant response.

Postulating that we are talking about the Roman Catholic Church, is there any situation in which the magisterium may and must say: "This position is faulty. It is opposed to the authentic interpretation of Holy Scripture and contrary to the defined doctrine of the Church?"

Let us suppose for the sake of the clarity of the discussion that Father X and Mr. Y maintain that Jesus the Christ is not divine but a human prophet among the prophets. Or that he rose from the dead only in a symbolical sense. Does anyone in the Catholic Church have the right and duty to say: "Stop there. This teaching is erroneous and misleading?"

We are further postulating that he (she) who holds and teaches such opinion is someone with vast prestige and penetrating influence. Perhaps even someone who is officially mandated by the Church as a theologian. Does the teaching role impose any obligation on Church authority to make it clear that this is only a personal opinion, however academically qualified its author may be, in order to warn the unsuspecting and less qualified faithful that in

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Can a Catholic thinker be a modern academic?

Catholic theologians, sometimes at odds with Vatican decrees, argue that they can.

by Gregory Baum

Under Pope John Paul II the Vatican has initiated legal proceedings against several Catholic theologians. Hans Küng, theologian at the University of Tübingen, it has been decreed, may no longer regard himself as a Catholic theologian. According to the concordat between the Church and the German state, this means that Küng, while remaining a tenured professor at the university, may no longer occupy the chair of Catholic theology. Accompanied as it is by proceedings against other theologians in Europe, North and South America, the censure of Küng greatly worries educated Catholics in all parts of the world. It could be a signal of a new Vatican offensive against free inquiry and theological pluralism.

Catholics remember the frequent interventions of the Vatican against scientific inquiry, critical historical research and the assimilation of modern philosophical trends. They recall in particular the notorious letter, *Tuas Libenter*, of Pope Pius IX, addressed to the archbishop of Munich in 1863, which condemned the critical approach to historical and theological research advocated by a theological congress held in Munich in the same year. Equally notorious was the decree, *Lamentabili*, of 1907, which condemned a long series of propositions and hypotheses entertained by Catholic scholars in their attempt to reconcile the Catholic tradition with modern thought and modern critical methods. Catholics remember the many repudiations and warnings coming from Rome, and they recall the anguish, the suffering and often the broken careers which these inflicted on many faithful scholars in the Church.

Catholics believed that after Vatican Council II (1962-65), the Roman authorities were ready to respect scientific and philosophical research and exercise their teaching office in a new manner, with greater sensitivity to the rules of scholar-

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In December of 1979, the Vatican, in a stern move to uphold traditional doctrine, censured a leading liberal theologian, the Reverend Hans Küng, and barred him from teaching.

Father Küng is the author of several books and scholarly papers that question and often reinterpret age-old tenets of the Roman Catholic faith. His writings have been translated into many languages. Father Küng, who is Swiss, is professor of theology at the University of Tübingen in West Germany and head of its Institute of Ecumenical Research. He is the author of *Infallible? — An Inquiry*, *On Being Christian* and many other works.

The Vatican declaration said that some works by Professor Küng had disturbed the faithful and had been found to deviate from the dogma of the infallibility of the Church and other basic Catholic beliefs. The statements charged him with departing, in his writings, from "the integral truth of Catholic faith," and added that "therefore he can no longer be considered a Catholic theologian nor function as such in a teaching role." However, his university is under civil authorities, and the Vatican action did not preclude his continuing to teach there. The Vatican's move did not affect Professor Küng's status as a priest.

The articles appearing here are by two Canadian theologians, each with a deep concern over the implications of the Hans Küng affair for the future of church teaching and theological investigation.

Hans Küng under fire

Separating theological issues

this way lies shipwreck in faith?

I, for one, find it difficult to imagine more than one answer to these questions in the context of Catholicism. There are many, and among them very respected theologians, who deny this right or obligation to any Church. But these very persons would be the first to insist that they are speaking out of a different context and tradition.

Integral to Catholic Christianity has been the conviction that the magisterium has the right and duty to define and defend what it understands to be essential to the truth of the Gospel.

If then, as maintained, Hans Kung has held and taught positions that cast doubt upon the divinity of Christ and that repudiate the Church's understanding of infallibility, why should one be surprised if Church authorities declare that for doing so he is no longer to be considered in any official sense a Catholic theologian?

Interestingly enough, in spite of many misleading public presentations to the contrary, the vast majority of responsible theologians both repudiate Kung's teaching in these areas and agree that the Church has the right and the duty to point out that this, truly, is not Catholic teaching.

Is then the problem somewhere else? Is there perhaps some confusion of issues. We read articles in which at one and the same time we are discussing the magisterium, the procedures used by the Congregation for the Doctrine of Faith (always throw in "successor of the Inquisition," otherwise someone might think you were biased), the brilliance of Hans Kung and the inferiority of Roman theologians, the right of the Pope to condemn, coupled with his Polish ancestry — all rolled into one indigestible lump.

Pulling the elements apart and setting them in some kind of order is not easy.

We have already suggested that the right to condemn a theological opinion is an integral part of the Catholic Church. What now about the procedures?

In this area real concern is both legitimate and healthy. But before we offer any positive suggestions, let us make sure that here too we are not exaggerating.

Was Hans Kung tried in absentia? Was he informed of the charges against him? Was his trial clandestine? These are three basic and very legitimate questions. Much as we hate to introduce facts into what has been such a delightfully recreational exercise for some who have publicly commented, they might conceivably be of some value.

First, the "in absentia" question. Hans Kung published a book entitled *Die Kirche (The Church)* in 1967. The Congregation for the Doctrine of the Faith communicated with him on April 30, 1968 and invited him to discuss its contents. "Kung declared himself open to this in principle (but) the conversations did not take place despite repeated invitations." (Declaration, Pres. Conference of German Bishops Dec. 18/79).

In 1970 Hans Kung published a book entitled *Unfelbar? Eine Anfrage (Infallible? An Inquiry).* After examination the Congregation sent to Mr. Kung a series of questions. *"The voluminous exchange of letters* did not bring a response satisfactory to the Congregation." (Emphasis ours).

In 1973 the Congregation published a declaration, The Mystery of the Church, questioning and opposing Kung's teachings. The position of the Congregation was presented personally to Kung by a member and he was informed that further conversation was possible and desirable. Kung did not avail himself of the offer. In 1974 (Sept. 4) he wrote to the Congregation assuring them that he wished to take advantage of the "time for reflection" granted him and even held forth the possibility that he could come to conform his teaching to that of the magisterium. In view of his positive response the doctrinal procedure against him was closed "for now".

The publication in 1974 of *Christ Sein (On Being a Christian)* inaugurated a new round of discussions and publications. The focus of concern was Kung's understanding of the mystery of Christ. Many German Catholic theologians as well as the German Bishops' Conference raised serious questions about the compatibility of Kung's position with the Church's traditional understanding of Jesus.

The event that seems to have led to the intervention of the Congregation was the 1979 publication by Kung of a book and an extensive article on infallibility. Far from modifying his position he made it even more explicit. This was seen as deliberately provocative.

In the light of the above, the reader can judge whether there was a sincere attempt at dialogue with Kung.

The second question of his being informed of the charges requires no further elucidation. It could be maintained that never was a theologian so thoroughly informed of the charges against him.

In what way was his trial clandestine? Only in as much as he was not present at the meetings of the theologians in Rome who examined his works or at the meetings of the Congregation itself. He was invited repeatedly to Rome to discuss his position but he refused to go unless orocedures acceptable to him could be developed.

Does all this mean that we need have no reservations in this matter? Hardly. It is a painful event from which all of us may well learn something if we are open to that learning.

The first consideration is that no one should leap to the conclusion that the Church is in some sort of regression, that we are going back to pre-Vatican II days. Those outside the Catholic Church are frequently more apprehensive about the monolithic, dictatorial myth of the Church than we are.

One of the great lessons taught — or retaught — us by Vatican II is that the Church is a community of believers and that, although we accept the principle of an authenticating authority, the Church goes where the spirit leads it. No one can, no one of any importance wishes, to negate, betray or destroy the work of Vatican II. And, I repeat, no one could, even if he or she wished to.

Another lesson re-taught us by Vatican II is that we are a learning church. Cardinal Newman has often been described as the unseen presence in that Council. His penetrating and forward-looking ideas about the development of doctrine were a beacon-light to us. We can never pretend that we have plumbed all the depths of the "wisdom and of the knowledge of God." If Aquinas could say that all of his magnificent edifice of inquiry was "just straw", how can we possibly imagine that we will ever fully "arrive" in this world. The fact that we seek the truth means that, in a way, we have found it. But, having found it a little, means only that we must seek it much more. The Church has the right and the duty to tell a theologian he (she) has erred. The Church can never tell a theologian or all theologians to stop searching. And here, it appears, at least to me, that we have another lesson. It seems infinitely regrettable that the general public perception, due in part to hasty and irresponsible statements by a few theologians, but most of all by the typical orientation of the media to the spectacular, is that an adversarial situation has been created between the official Church and the body of theologians. I am convinc-

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Can a Catholic thinker be a modern academic?

ship. According to the Catholic tradition, ecclesiastical authority has the task of protecting the memory of the divine events upon which the Christian faith is based and to guide the Catholic self-understanding in the world; but it was hoped that after Vatican Council II, the ecclesiastical authority would no longer condemn theological positions without involving itself in the scholarly conversation and offer some answers to the questions that are being raised.

It is no longer possible today to resolve theological difficulties by decrees from on high. If questions emerge in the Church, they need answers; and these answers are worked out only if there is lively discussion and debate among theologians. The Küng case may well be a signal that the authoritarian rule over intelligence is returning in the Church.

It is not easy to explain the conflict in the Catholic Church to secular scholars. They find it extremely difficult to understand how thinkers trained in philosophy and history and possibly the social sciences can even entertain the idea that an authority is set over them. They wonder how a person can be a believing Catholic and at the same time an honest scholar. The claim of the Catholic Church to rule on matters of research and interpretation reminds them of the behaviour of the Communist Party which defines an orthodox interpretation of Marx and Engels, an authoritative version of the history of the revolution, and an official approach to the various sciences, and which condemns all deviations from this official self-definition as unorthodox and false, even when these are offered by Marxists. At this time, Euro-Communism is attempting to regain freedom of thought within the commitment to the Marxist tradition. It is difficult for secular scholars to understand how Catholic theologians seriously anguish about their fidelity to the scriptures, their conformity to the great tradition, and even their coherence with present church authority.

Perhaps the only secular scholars who can understand the Catholic dilemma are the social scientists who recognize that man's encounter of the world, and even man's own self-understanding, are mediated through a symbol system or coordinates of meaning that dominate the imagination. Therefore all scientific research into human life, personal and social, is always and inevitably guided by a value perspective, by fundamental assumptions about the world, by a vision, often quite unthematic and only partially conscious, of what human beings ought to be like. Such a value perspective is in fact research-guiding: it is responsible for raising the question, for selecting the data, for adopting conceptual tools, for the sensitivity with which the data is read, and for the intentionality which carries and energizes the scholarly research. These social scientists argue that the value-neutral approach to human studies is an illusion. The scholars who affirm their neutrality have in fact assimilated the value perspective of the cultural mainstream.

In the context of this debate among social scientists, it is possible to accept that there are Catholic thinkers who are wholly committed to a value perspective, a symbol system received from historical events they regard as revelatory, that mediates to them both the perception of the world and their own self-understanding, and who at the same time insist that this does not interfere with their scholarly task of research, free inquiry, and new understanding. In this context it may be explained why Catholic scholars, and I think Christian scholars in general, lay claim to a double fidelity (the expression is David Tracy's): fidelity to the value perspective they have received (they speak here of divine revelation in the biblical events and the Church's tradition) and fidelity to the modern methods of

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UNIVERSITY OF GUELPH

University School of Rural Planning and Development

DIRECTOR

The University seeks applications for the newly created position of Director for the University School of Rural Planning and Development, which will be established as of 1 July 1980. This new academic unit will offer programs, initially at the graduate level, in cooperation with existing Colleges and Departments, in the broad area encompassed by rural planning, rural development and resources development. The School will also participate in those outreach activities of the University which can facilitate integrated rural development.

The Director should have extensive teaching and research experience, together with graduate qualifications, in the areas of rural planning and development. It would be helpful to hold qualifications required for membership in the Canadian Institute of Planning.

Closing date for applications: June 13, 1980.

Applications and further enquiries should be addressed to: Dr. H.C. Clark, Vice President Academic, University of Guelph, Guelph, Ontario, N1G 2W1.

AMNESTY INTERNATIONAL

by William Bryant

Canadian Teachers Group

What do these people have in common? They are all subjects of recent AI Urgent Actions, for they were arrested and detained because of their beliefs.

URGENT ACTION: Malaysia: Yong Ah Chit — "Mr. Yong Ah Chit has been detained since 1975 under the Internal Security Act and is currently held without trial in the Taiping Detention Camp. He was formerly a teacher and member of the Chinese Language Society of the University of Malaya. He is an AI adopted prisoner. Mr. Yong is showing the effects of severe mental stress resulting from his confinement for approximately four years." (10 September 1979)

URGENT ACTION: Romania: Nicolae Dascalu, "a teacher, was sentenced to 18 months' imprisonment for illegally imparting information abroad, which was reduced to 10 months on appeal. Mr. Dascalu is reported to have been seriously maltreated in prison." (6 September 1979)

URGENT ACTION: Uruguay: Lilian Celiberti de Casariego, aged 28, teacher, was abducted with her two children in Porto Alegre, Brazil, where they were living as refugees, in November, 1978, and illegally transferred to Uruguay. Her whereabouts are not known and she is reported to have been severely tortured. (24 October 1979)

Formation of a Canadian Teachers Group

At the April, 1979, executive meeting of Amnesty International Canada (English-speaking), the executive approved a policy for the formation of a Canadian Teachers Group of Amnesty International in Canada. This group, which has already received publicity here (*CAUT Bulletin ACPU* Oct. '79), will be officially formed at the next Annual General Meeting of AICS (English-speaking) to be held May 30 — June 1, 1980 in Sackville, N.B.

As conceived, the Canadian Teachers Group would exist on four major levels: university, community college, secondary and elementary. Four major options were outlined for its activities.

1. To help *bona fide* prisoners of conscience who are teachers;
2. To participate in the Urgent Action network on behalf of teachers;
3. To publicize the situation of such prisoners of conscience among teachers and other concerned persons;
4. To take Amnesty materials (adapted to the various levels) into the schools.

Obviously, university teachers would be helping mainly those persons who are at the university level.

Who is a prisoner of conscience?

A prisoner of conscience is — first and foremost — a person. He or she is a person who has been detained, arrested or imprisoned anywhere for their beliefs, colour, ethnic origin or religion, provided they have neither used nor advocated violence. Moreover, such people may face torture or the death penalty, both of which Amnesty opposes.

But who, specifically, is a prisoner of conscience?

Yuri Badzyo, of the Soviet Union, is a prisoner of conscience. A 43-year-old Ukrainian philologist, he was imprisoned for his work on Soviet policy as it affected the Ukraine. His closed trial, which followed the normal Soviet pattern for Soviet dissidents, took place in Kiev on 21 December 1979, and he was given the maximum sentence of seven years' imprisonment in a corrective labour colony and five years' internal exile for "anti-Soviet agitation and propaganda".

Ana Silva

He held a post, until 1965, at the Institute of Literature of the Ukrainian Academy of Sciences, but because of his protests he was refused work in his profession and worked as a bread loader for eight years until his arrest.

Khamking Souvanlasy of the People's Democratic Republic of Laos is also a prisoner of conscience. He is a 50-year-old former Director General of the Laotian Ministry of Education, but he has been detained without charge or trial for more than three years in a "re-education" camp in Sam Neua province in the north-east of Laos.

After a change of government in 1975, the new authorities in Laos set up "political seminars" and "re-education camps for members of the previous "conservative" administration and others deemed to be in need of "political re-education". Khamking Souvanlasy, a teacher by profession, is still there without any reason being given for his continued detention.

As a final example, Ana Rosa Kucinski Silva of Brazil represents the problem of disappearances. As assistant professor of chemistry at the University of Sao Paulo, she was last seen by friends on 22 April 1974. Later the same day her husband Dr. Wilson Silva disappeared on his way from work.

Her father, Meyer Kucinski, well-known poet and writer, immediately made inquiries and was told by officials that neither his daughter nor his son-in-law had been detained by the government, but he later learned through unofficial channels that the couple had been arrested by the *Departamento de Ordem Politica e Social* in Sao Paulo (the political interrogation unit described in AI's 1976 *Report on Allegations of Torture in Brazil*) and that they had subsequently been transferred to the custody of the second army division.

Three scientists, the first in Uruguay and the other two in the Soviet Union, tortured and imprisoned for standing up for freedom of thought! Each has been adopted by Amnesty International as a Prisoner of Conscience. Can we forget them?

Massera, Orlov, Shcharansky

by Israel Halperin

José Luis Massera . . . the leading mathematician in Uruguay, internationally respected for his researches in differential equations, author of 43 published mathematical works and a founding member of the Institute of Mathematics and Statistics in Montevideo. He was a professor at the university.

Professor Massera was also a member of parliament at a time when Uruguay had a parliament. He was a member of the Communist Party at a time when that party was perfectly legal in Uruguay, just as that party is legal today in France. When the military seized power in Uruguay there was a wave of arrests with torture for political opponents. Professor Massera was seized, savagely beaten up, and for a long time held incommunicado, without medical care, although his pelvis had been broken.

Massera's wife, Martha, a distinguished lawyer, actively petitioned the military authorities for information on her husband's health. She herself was then arrested. Massera's daughter, a teacher, and her husband, an architect, were arrested and tortured, but later set free.

Since October 21, 1975, when Massera was first seized, many prominent individuals, scientists, and organizations have worked for the release of J.L. Massera. Amnesty International and the International Committee of Mathematicians led a campaign that has certainly had some influence. Professor Massera was put in a military hospital for a major operation (pelvis) in December, 1975. Very recently Madam Massera was released; she is allowed to visit her husband from time to time, and his physical condition seems to be reasonably fair.

It is doubtful that Professor Massera has ever had a trial but the Uruguayan authorities are vague about this. It was understood that a trial (or a judicial review) was to take place in February, 1980 and a lawyer in Paris was engaged by the International Committee of Mathematicians to fly to Montevideo to represent them, but the trial simply did not take place.

As far back as December 1975, the Canadian Mathematical Society spoke up on behalf of Massera by a cable to the President of Uruguay and by an urgent appeal to the Canadian Association of University Teachers to intervene in this case. Supported now by information from Amnesty International, the CAUT in its turn sent a cable to Uruguay and also called on the Department of External Affairs to communicate the concern of Canadian academics to the Uruguayan authorities. After a long delay External Affairs replied it was reluctant to do so. Two years later, in 1978, Canadian mathematicians took up the case again, and wrote to the Prime Minister of Canada asking him to intervene directly with the President of Uruguay. This appeal was supported by thousands of individual mathematicians, other scientists, and such personalities as Pierre Berton.

In a sympathetic answer, the Prime Minister, while not agreeing to such direct intervention, nevertheless communicated that the Canadian Ambassador had expressed the concern of Canadians to the Minister of Foreign Affairs for Uruguay.

Under further prodding by the CAUT in January 1979, External Affairs stated that the Canadian Ambassador had told the Uruguayan authorities that the case of Massera was one that particularly attracts unfavourable attention to Uruguay.

In other countries as in Canada, the case of Massera has aroused mathematicians, scientists and others. Even such conservative organizations as the National Academy of Sciences of the U.S.A. and the Academy in Paris have sent urgent and repeated messages to Uruguay.

Yury Orlov . . . described by the National Academy of Sciences of the U.S.A., as an internationally recognized expert in non-linear focusing electron accelerator technology. Prior to 1972 he worked at a Physics Institute in Armenia. In 1963 he obtained his doctorate; in 1968 he was elected a corresponding member of the Armenian Academy of Sciences. In 1972 Orlov returned to Moscow and began working at the Institute of Earth Magnetism and Diffusion of Radio Waves of the Academy of Sciences of the U.S.S.R.

In 1973 Orlov wrote an open letter to President Brezhnev in defence of Sakharov and became a founding member of the Soviet group of Amnesty International. Presumably because of *this*, Orlov was dismissed from his post in January 1974.

From then on Orlov was a very bad boy from the Soviet bureaucracy point of view. Orlov protested the deportation of Solzhenitsyn. Then he wrote and published abroad an article which proved that the concentration of political and economic power in the hands of a centralized bureaucracy inevitably leads to the loss of individual freedoms. Then in 1976, Orlov organized and led the Group to Assist the Implementation of the Helsinki Agreements in the U.S.S.R. He lived by giving private lessons in mathematics and physics and continued his scientific work at home.

In 1978 the Soviet bureaucracy turned on the Helsinki Group. Orlov was arrested and accused of anti-Soviet agitation and propaganda. He was denied the right to call witnesses in his defence and not permitted to cross-examine those who were called out to speak against him. When he was given a chance to speak, Orlov said he was in favour of gradual democratic changes in Soviet society and that his attitude to the existing order, as to any other state system, was a critical one.

Orlov received the maximum sentence of seven years hard labour and five years exile on May 18, 1978.

Amnesty International called urgently to its members all over the world (outside of the U.S.S.R.) to appeal to the Soviet Union to reduce or remove the prison sentence. Those persons and organizations and governments which had hoped that the Helsinki agreements would be lived up to, protested strongly this punishment of Orlov. And many individuals, scientists and scientific organizations spoke out. In the U.S.A. very strong statements were issued by the National Academy, the Federation of American Scientists and the American Physical Society. Many scientists cancelled

Massera, Orlov....

scientific exchanges with the Soviet Union.

Professor Norman F. Ramsey, Nobel Laureate in Physics, issued a statement as President of the American Physical Society: "Yuri Orlov is a productive and ingenious physicist...As President of the American Physical Society, I regard both the nature of the trial and the severity of the sentence as serious affronts to human dignity and impediments to scientific progress and cooperation."

On January 21, 1980, Dr. Lewis Branscomb, the present President of the American Physical Society, wrote to the President of the U.S.S.R. Academy of Sciences, Academician Alexandrov: "According to our informants, Yuri Orlov's health has gravely deteriorated during his imprisonment: he is emaciated, suffers from wide-spread tooth decay and has chronic headaches. His wife, who has visited him, seriously fears that the treatment her husband is receiving from the prison authorities will kill him...my colleagues are dismayed that the camp authorities interfere with Dr. Orlov's efforts to do scientific work in his spare time...Preventing Dr. Orlov from attempting to maintain his technical capabilities despite his present trying circumstances is wasteful of this world's much needed scientific talent...American physicists are convinced Dr. Orlov was unjustly imprisoned for activities which are legal under the Soviet Constitution and protected by the Helsinki Accords..."

In December 1979 Orlov was caught attempting to pass out of the camp an article presenting some new scientific results which he had obtained while imprisoned. Since he had been ordered to stop all scientific thinking, he was punished by confinement for six months to a special cell where he would receive a reduced diet and be in solitary confinement when not doing camp work.

Anatoly Shcharansky . . . a computer scientist, employed until 1975 at the All-Union Scientific Research Institute of Oil and Gas. Then, after repeated applications for permission to emigrate to Israel, he lost his post. He became one of the most active participants in the Soviet human rights movement. He spoke English fluently and acted as interpreter for the Helsinki Group of which he was a member. He acted as interpreter also for Sakharov, the Nobel Laureate and famous leader in the human rights movement in the USSR.

The Soviet press printed stories of Shcharansky's contacts with foreign press correspondents, charging that he was acting as a spy for the Americans. After he had been accused in the press of treason, and found guilty (still in the press), finally Shcharansky was seized and held for questioning, incommunicado, for more than a year.

On July 10-14, 1978 there was a trial, Shcharansky was convicted of anti-Soviet agitation and high treason, sentenced to 13 years of which three were to be in prison and ten in hard labour camp.

The trial of Shcharansky, from which observers were excluded, and the sinister implications of future terrible suppression of all who criticized the official bureaucratic line, aroused deep concern all over the western world. The protests were impressive.

Dr. Sakharov stated: "...Shcharansky lived such an open life that it completely precluded any kind of secret activity. He spoke openly against the violation of the right to emigrate and against other violations of human rights. He openly joined the Helsinki group and openly met foreign correspondents and guests from abroad...I am convinced that it was precisely for his boldness and openness, for his consistent, humanitarian and honest position that Shcharansky has been chosen as the latest victim."

In Canada, where Shcharansky has cousins, the government told the Soviet Ambassador that Canada would give Shcharansky landed immigrant status if he were allowed to come to Canada. When this offer was ignored the Canadian Parliament passed a resolution expressing its disappointment and criticizing the attitude of the Soviet Union.

And there are others Kovalev, biologist, active in the Soviet human rights movement; Gluzman, psychiatrist, refused to cooperate in the 'psychiatric abuse' of dissidents; and in Czechoslovakia two scientists: Vladimir Lastuvka, nuclear physicist, and Ales Machacek, agricultural chemist, both involved with the famous 'Charter 77' movement, struggling for human rights. All are in prison or in hard labour camps.

What can we do? We can protest, gently, firmly and finally if necessary, with teeth in our protest. No scientist or scholar needs to terminate his own professional work, but one can protest individually, or jointly with others of his profession. Professional organizations would speak out strongly if their members wished them to do so, and governments could speak out very powerfully if the citizens of the country showed that this was wanted. Amnesty International (Canadian head office in Ottawa) is specifically organized to combat torture and a new organization, The Canadian Committee of Scientists and Scholars (Chairman Professor Eric Fawcett, Physics Department University of Toronto) invites scientists and scholars to protest oppression of colleagues by using this committee.

Dr. Halperin is Professor Emeritus of Mathematics, University of Toronto.

Teachers Group...

Ana Silva was reported at the time to be in poor health, both mentally and physically, as a result of torture suffered in the first weeks of detention.

Moreover, in December 1974 the Kucinski family received information from sources in the United States that the *Departomento de Operocoes Integrados* admitted to holding the couple since April. In spite of this neither Ana nor Wilson Silva has even been brought before a judge or allowed visits by family or lawyers.

Nevertheless, people are released. Such is the case of Mahanth Thakur, a Neapli university lecturer dismissed from his teaching post and detained without trial as a result of his allegiance to the banned Nepali Congress Party.

However, more people are needed to write those necessary polite and courteous letters to governments asking the important questions, questions which are so major a part of the university community, which is or should be a centre for free expression.

We encourage university teachers to join in the Canadian Teachers Group and we ask interested persons to write to the following address:

Amnesty International Canada
c/o Wm. Bryant — Group
Affairs Secretary
2101 Algonquin Ave.,
P.O. Box 6033, Stn. J.
K2A 1T1

UNIVERSITY OF WATERLOO

Invites Nominations and Applications for the Office of

PRESIDENT

The University of Waterloo is a publicly-funded University with six Faculties — Arts, Engineering, Environmental Studies, Human Kinetics and Leisure Studies, Mathematics and Science. The University pioneered the co-operative system of education in Canada, and now offers the system in all of its Faculties. The current full-time undergraduate enrolment is about 13,500; graduate full-time enrolment is approximately 1,100. Part-time enrolment approaches 4,450 in undergraduate studies, and about 650 in graduate studies.

The appointment of the President is to take effect on or about July 1, 1981.

Nominations should state the name and address of the individual. Applications should be accompanied by a detailed curriculum vitae and the names of not less than three referees.

The deadline for receipt of nominations or applications is July 31, 1980.

All correspondence is to be directed in confidence to:

Mr. J.W. Brown
Secretary of the University
University of Waterloo
200 University Avenue West
Waterloo, Ontario, Canada
N2L 3G1

Philosopher's open warfare for freedom of thought

Paul Flather on Prague's underground university and the struggles of the man behind it

Show of Soviet strength in streets of Prague

Dr. Julius Tomin's last full-time job was as a night-watchman at Prague Zoo. He has also worked for five years as a turbine-operator, and as a jobbing-gardener. But for much of the last 10 years Tomin has been unemployed.

Tomin is also a philosopher. He runs two courses of unofficial seminars, usually held twice a week in his small flat in the Czechoslovak capital. In May 1978 Tomin, already facing constant police harrassment because of his activities, sent an open letter to four leading universities in the West inviting academics to come and talk at his seminars.

He wrote: "I, my friends, and my students, all live in Czechoslovakia. It is now a year since we decided no longer to accede to the illegal way in which the representatives of State power in this country arrogate themselves the right to decide who may be allowed to study and what they should be studying, who may give lectures and what subjects they should lecture on. We therefore resolved to get together for the purpose of studying philosophy...As was to be expected it was not long before Officials of the Ministry of Interior began to take an interest in our work...We cannot accept a state of affairs where the authorities decide to whom we may write and from whom (we) receive letters, who may come and visit us, who may talk to us and who may share his knowledge and his experience with us."

The letter, sent to Oxford, Harvard, Heidelberg and the Free University in West Berlin, described the obstacles faced by Tomin and his students, most of whom had been sacked from their jobs and excluded from studying after the age of 14. But Tomin was not complaining. He was claiming a right, the right to know what philosophers in the West were thinking, and he invited them to Prague to share their ideas.

The letter went astray at Oxford and it was almost a year before it surfaced at a sub-faculty meeting of the philosophy department in early 1979. Almost without any discussion the sub-faculty voted to accept the invitation and received £500 to finance the visits of three lecturers to Prague.

Tomin expressed great surprise when the first Western academic arrived at his flat — he had almost given up hope of any contact through his letter. Oxford was the only university to respond, though now interest in his seminars is considerable.

Distinguished visitors

In the last nine months a stream of distinguished philosophers have visited Prague. The list includes Professor Charles Taylor, Chichele Professor of social and political theory at All Souls College, Oxford; Dr. Kathleen Wilkes, fellow in philosophy at St. Hilda's college, Oxford, and Mr. Alan Montefiori, Herbert Samuel fellow in philosophy at Balliol College, Oxford.

Many of the other philosophers to visit Prague prefer not to publicize their trips.

Almost all have come back astonished at the intensity of commitment of Tomin and his students, and disgusted at the harassment by the Czech authorities on academics "whose only aim is to live normally, studying philosophy". As one of these visitors put it: "To study Berkeley's *Principles of Human Knowledge* or even Plato, or Aristotle, can hardly be described as subversive."

Tomin is a professional philosopher. He studied at Charles University in Prague, where he also attained his doctorate. This was despite being imprisoned in the late 1950s for refusing military service, an act that was almost unprecedented among Young Communists at the time.

One of his supervisors was Professor Jan Patochka, a distinguished philosopher who became the leading spokesman for Charter 77 when it was signed in January that year. (He died just two months later, but the unofficial seminars now given by Tomin and others in Prague, Brno and Bratislava, are known collectively as the Patochka University, the equivalent though on a much smaller scale of Poland's now famous Flying University).

Throughout the 1960s, Tomin continued to defend the individual's rights against the Czech regime through open letters and hunger strikes. In the Prague Spring of 1968 Tomin restricted his activities to the pursuit of philosophy, meeting regularly with other leading academics in the city. Just after the Soviet invasion in August which led to the removal of Dubcek and the great purges of the party and the university, Tomin left with his family to take up a one-year fellowship at the University of Manoa in Hawaii.

One lecturer at Manoa remembers it was quite impossible to persuade Tomin to stay in the West. He felt unable to exercise his freedoms while his colleagues lacked theirs. "You can buy my time, but you cannot buy my mind," Tomin had said. He returned to Prague with his wife, Zdena Tominova, now a leading Charter 77 spokeswoman, and his two sons, to find himself stripped of all his ties with the university.

Tomin was forced to take on any jobs he could find, using his spare time as a turbine-operator or night-watchman to read the Greek classics. In 1977 Tomin and Zdena both signed the Charter, which in police circles is strangely known as the Dinosaur.

The Charter breathed new life into unofficial Czech culture — literary works were published by the aptly named Padlock Publications, art exhibitions were held in private homes, pop groups including the Plastic People of the Universe who now enjoy cult status, emerged, and the Living Room Theatre was born.

The Patochka University began with intellectuals merely trying to keep in touch with each other: gradually unofficial seminars and courses developed. But they were in no way illegal under the Czech Constitution and the 1975 Helsinki Agreement on Human Rights.

Professor Milan Machovec who gave the first series of such seminars in 1977, was regularly interrogated by the Secret Police (the *bartolomejska*) and twice his seminars were brutally disrupted. Constant harassment forced him to abandon the meetings even though the subjects discussed were merely Virgil and Ancient Philosophy and Scholasticism.

Tomin has faced similar harassment. He has been arrested, he has been offered bribes and threats to stop his seminars, the police have tried to break his thumb and have him certified in a psychiatric unit. Three of his students — Vladimir Prajzler, Lenka Dvorkakova and Ludvik Bedner — have recently been expelled from their colleges for attending "anti-socialist" lectures given by Tomin and two Western academics. The topics covered were Plato and the philosophy of W.V.O. Quine.

In June last year Zdena Tominova was attacked by a masked man as she was entering her flat in the Letna district of Prague. She was knocked down and struck repeatedly, but the attacker fled when her screams attracted the attention of people returning from a nearby cinema.

She was taken to hospital with concussion and Tomin, then working at the zoo, rushed to her bedside when he heard the news. The next day his colleagues showed surprise when he arrived for work. Apparently Tomin was also supposed to have been beaten up and in hospital.

For five months after that incident two policemen were stationed outside the Tomin's flat. They prevented all visitors — including friends of Marek, aged 10, and Lucás, aged 16 — from visiting the Tomins. Lucás was forced to leave school because of the activities of his parents.

Family lost jobs

At one stage Tomin was even asked to sign a report agreeing to the "sacking" of Lucás from a book-binding apprenticeship because he had refused to work more than eight hours a day. Zdena has also lost her job as a government interpreter. It should be noted that harassment of Zdena is more the result of her activities as a leading Chartist than because of Tomin's work.

Tomin has protested on several occasions to the Minister of the Interior about the police "protection" outside his front door. On September 28 last year, he wrote to the Minister that as such activity was unlawful he did not recognize the policemen and so had refused to show them his identity card.

On another occasion when the police actually broke into his flat, he wrote to the Minister commiserating over the lamentable shortage of funds to maintain all the bugging devices in the country.

Once during a police interrogation Tomin translated a speech on democracy by Pericles from Thucydides in reply to a question about the subject matter of his seminars. After listening in silence for 45 minutes they continued their questions. Tomin became angry because they had ignored his private tutorial. The police paused — said it had been a wonderful experience — and continued their questioning.

The harassment culminated on October 8 when Tomin was arrested in Repcice in Northern Bohemia by a police squad equipped with machine guns and dogs. He was detained in a psychiatric unit but released soon after apparently unharmed. But such was the interest in Tomin's work by then that two dozen British academics, including most of the leading philosophers, immediately dispatched a letter of protest to the Czech government.

Most of Tomin's seminars take place in his small living room, or that of one of his colleagues. Often more than 20 students are crammed into the room, the air thick with smoke. Dr. Wilkes gave three seminars during an 11-day visit and all lasted between six and 10 hours, interrupted only to circulate cups of weak tea.

The atmosphere is intense, the commitment extraordinary. There is no time for small-talk. When Dr. Wilkes casually asked one student why she risked so much to attend these unofficial seminars, the student had replied, somewhat puzzled: "I must go. For me it is life."

Tomin, who speaks French, German, English, Russian and is learning to *speak* ancient Greek, translates each section of the talk for the students, and then leads the discussion, again translating back into English for the benefit of the Western academic. Dr. Wilkes points out that EEC translaters are changed every 20 minutes — Tomin works sometimes for 10 hours at a stretch.

No second-hand opinions

One irony of the repressive conditions under which the Patochka University is forced to work, is that it produces very high levels of understanding and discussion. "They cannot give you second-hand opinions because they have no access to secondary sources. Whatever they have read, they bring into the discussions", says Dr. Wilkes.

In other words all the books in the Bodleian Library will not produce genius on their own. But the students devour new material; one technical article taken to Prague was borrowed for a week and returned after passing through 40 pairs of hands.

Nor are the students confined to following syllabuses or timetables or conventions of thought. Indeed it is the very unexpectedness of their arguments which is so stimulating, according to one visitor to Prague.

Tomin's seminars have now been running for almost two years, longer than any other series in the Patochka University and they have certainly gained from the visits of Western academics. But as Tomin has become better known in the West, attention has focused on his students, some of whom are being harassed continually. One student, Tomas Lichka was given treatment in a psychiatric unit. Tomin's blunt confrontation of the State contrasts sharply with a longer term perspective favoured by other dissidents.

This difference in tactics was dramatically illustrated at one seminar when a Swedish journalist asked Tomin if he could take a photograph of the people attending the meeting. Many people argued it would be better if there was no photographic record.

But Tomin demanded the picture should be taken. He believes that if anything is so secret the police will make it their business to find out. His is a position of principle,

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Can a Catholic thinker...

research and critical interpretation. Catholic theologians hold that while these two fidelities may occasionally create tensions, they are basically not in conflict.

It is this double fidelity, fidelity to faith and to reason, fidelity to the received divine revelation and to enlightenment reason, that accounts for the struggle, the drama and the adventure of Catholic theology. It is because of this fidelity to biblical faith that Catholic intellectuals do not simply shrug their shoulders in regard to church authority, even when this authority refuses to face up to intellectual difficulties. Instead, Catholic religious thinkers prefer to wrestle within the Church and work for a change of ecclesiastical leadership, one that recognizes in theology twofold fidelity. No call to be obedient to divine authority can ever dispense a Catholic theologian from wrestling with the intellectual questions posed to her faith.

It would appear that Pope John Paul II does not fully recognize the double fidelity of Catholic theology. He still acts in accordance with the pre-modern view, practiced in the Church for centuries, that intellectual difficulties can be resolved by a decree from on high.

Can a Catholic thinker be a modern academic? Can a theologian or a theologically-oriented philosopher or social scientist be part of a modern university and join in the scholarly debate of his or her time? Catholic theologians, sometimes at odds with Vatican decrees, argue that they can. And why? One of the arguments they offer is properly theological. They argue that they belong to a Christian tradition that has always defended a basic harmony and coherence of creation and redemption. The action of God in Christ is not at odds with God's action in creation, with the human reality, with human reason and man's responsibility for building this world. In the Catholic tradition, the universality of human sin is recognized, but it is never regarded as so radical as wholly to corrupt God's work of creation. The redemption brought by Christ was always seen as healing the wounds of nature, as restoring the powers of human beings, and as elevating them to a new level of vitality, not grounded in their own resources but in a gratuitous divine gift. Redemption perfects creation along the line of its own inclination. This means that reason and faith are not at odds.

Reason is not an obstacle to faith. Of course, reason may be distorted by personal or social interests. Reason easily becomes an instrument of false consciousness. Reason can also collapse into what Max Weber celled 'formal reason,' i.e. purely scientific, positivistic or instrumental reason that shrugs its shoulders in regard to the substantive issues of human existence. But reason as an instrument of man's quest for truth cannot, according to the Catholic tradition, be at odds with the Christian message.

This is the reason why Catholic theologians passionately defend their double loyalty, to reason and scholarship on the one hand and to the Christian message on the other. They argue against secular scholars who wish to exclude them from the world of the university, and they argue with popes and bishops whenever they curtail academic freedom. Freedom and loyalty are not contradictory.

What are the questions raised by contemporary theologians that worry the Roman authorities? The first one has to do with Christology, i.e. the doctrine of Jesus Christ. The Church knows about Jesus from the books of the New Testament that record the memories of the first Christians and of the early Christian communities. The Church also follows the major creeds, formulated in the Fourth and Fifth Centuries, that express the doctrine of Christ in the metaphysical language of the period. Can Christology be formulated in a manner that is more understandable to the contemporary world? Here theologians follow two distinct approaches. Some theologians insist that the creeds add nothing new to the doctrine of the New Testament; the creeds simply reformulate what is contained in the scriptures. If this is so, then it should be possible to express the doctrine of the creeds in New Testament language, i.e. step away from the highly conceptual and philosophical language of the creeds (for instance that Jesus is 'of one substance' with the Father) and return to the more symbolic, imaginative and narrative language of the New Testament (Jesus as Son of Men, Son of God, Image of the Father, Word of God, exalted on the Father's right hand, etc.). This is how I understand Hans Küng's theological work.

Other Catholic theologians argue that the development from the New Testament to the great creeds added a new perspective and represents e creative adaptation of the biblical message to the cultural world of antiquity. If this is true, then there is every reason to suppose that such a development continues and that the Church is able to interpret and formulate the Christological message in accordance with the conceptuality and the aspirations of the modern world. This is what theologians like Karl Rahner and Edward Schillebeeckx do.

Rome is bothered by both these theological enterprises. Both seem to relativize the language of ancient creeds, even though both profess to be faithful to their essence. This question cannot be solved by a decree from on high. It has to be argued out. Both approaches, incidentally, are enormously rich. Contemporary Catholic theologians have produced such brilliant Christological studies, such a wealth of profound, scholarly and reflective theological literature, that one finds few parallel periods in the Church's history. That there is some envy of these extraordinary achievements in the Church cannot be denied.

The second question that worries Rome has to do with the Church's claim to infallibility. The Church has always believed that it was guided by the divine Spirit in the proclamation and application of the Christian message. This guidance was available, Christians believed, in accordance with the divine promises made by Christ. But what does divine guidance mean? For a long time this guidance was understood to mean that the Church was protected from error in its doctrinal decrees, especially in the more solemn ones. The Church was infallible. The Church keeps on teaching what it always taught, doctrine never changes. In the 20th Century it has become obvious to Catholics that church teaching has evolved a great deal and that in some instances the Church has even changed its teachings. The Council of Florence in the 15th Century declared that all people outside of the Roman Catholic Church, even when they invoke the name of Jesus, will go to hell immediately after death, while Vatican Council II taught that God offers divine grace to people wherever they may be and that no one in this world is deprived of the means of salvation.

Especially important is the 180 degree turn-about in church teaching regarding human rights. In the 19th century the popes vigorously condemned the notion of human rights and in particular religious liberty, while at Vatican Council II, after decades of controversies and an extended struggle at the council itself, the Church decided to defend religious liberty for all and promised to promote human rights as part of its essential mission. There are in fact many changes in Catholic teaching ('the ordinary magisterium of the Church') regarding faith and morality. How have these changes taken place? There were usually Catholics who defended positions at odds with the offical teaching, Catholics who were roundly condemned but whose positions later became the basis for the new church teaching approved by bishops and popes. Dissent has played an essential role in the evolution of Catholic teaching. Does it still make sense, in this situation, to understand the divine guidance offered to the Church in terms of infallibility?

Hans Küng and many other theologians argue that the time has come to give a more honest interpretation to this divine guidance. They argue that the Spirit-created vitality of the Church enables it to respond to new challenges, interpret the received message in the new historical circumstances, and correct inadequacies or even errors that have been made in church teaching of the past. Küng calls this the Church's 'indefectibility.' At this time Rome still rejects this theory.

Let it be said that neither Rome nor any bishops have until now honestly confronted the development of Catholic teaching and in particular the changes that have taken place. Popes and bishops still address the faithful as if the Church has never changed its mind, even though they remember very well the ecclesiastical controversies, including condemnations and censures, regarding human rights and religious liberty. In his first encyclical, Pope John Paul II teaches that the Catholic Church, in virtue of its Christological foundation, proclaims and promotes human rights in the world, without once adverting to the fact that for a very long time the Catholic Church actively and theoretically opposed civil liberties and religious freedom.

Catholic theologians recognize the pastoral office of popes and bishops to protect the memory of Jesus Christ and his gifts from neglect and distortions and to promote the unity of the Church spread over so many countries and even continents, but they argue that in the long run church teaching will lose credibility if it is unwilling to face historical facts and rational difficulties. Decrees from on high will not do when answers within faith to real questions are demanded. For this, dialogue must continue.

Professor Baum is in the Religious Studies Department of St. Michael's College, University of Toronto.

University of Guelph

Dean of Graduate Studies

Applications and nominations are invited for the position of Dean of Graduate Studies which will become vacant on July 1, 1980. The University of Guelph currently offers thirty-two Master's and twenty-one Ph.D. programs with a considerable but not exclusive emphasis on the life sciences. Approximately 750 graduate students are currently enrolled.

Candidates should have considereble experience in teaching particularly at the graduate level, in research, and university administration. The appointee will hold an academic appointment in an appropriate unit.

Applications and nominations should be submitted to Dr. H.C. Clark, Vice President Academic, University of Guelph, Guelph, Ontario, Canada, N1G 2W1. Applications should be received by June 1, 1980.

Separating theological issues...

ed that, as I have stated, the vast majority of Catholic theologians have repudiated Kung in the very areas where he has been challenged. There are numerous statements and even publications of many respected theologians to that intent.

But, might we not have put that integrity and ortbodoxy of the main body of theologians to better use. My disquiet in this dimension is admittedly inspired by my upbringing in a Western democracy permeated by a passionate dedication to due process and the principle of appearing to be just, as well as actually being so. I do not have a concrete solution to offer but I suggest that in such cases as Kung's, somewhere in the procedure, a truly representative group of theologians would be called upon for a relatively open examination and a report of findings. I could not, in our ecclesiology, postulate that this would be a final court. But what a guarantee it would constitute, what valuable assistance for the ultimate judgment of the congregation or central authority which must make the final decision — and most of all, what a help for us who know about these things only after the event and very incompletely. I know that ours is not the only model of democracy, but I believe we have something to offer in this matter.

What a pity if this unhappy incident in the history of the Church were in any way to endanger the progress we have made and are making both in the area of legitimate theological investigation and in the area of our relationship with those whose fellowship in our search for truth we so much desire and so much appreciate. But it need not be so. We would hope that a cool and clear-headed appraisal of our position on authority in teaching would be understood and respected, whether shared or not. We would hope that our growing pains in finding the best procedures, if such there be, would be sympathetically understood and even alleviated by wise counsel.

This is no time for men and women of good will to return to the sterile polemics of the past.

NOTES FROM WASHINGTON

by Clive Cookson

U.S. Freedom of Information Act under attack

The Freedom of Information Act has given the United States the most open government of any major country. The Act, which was originally passed in 1966 and extended in 1974, has benefitted not only journalists and the general public but also university scholars, especially social scientists and contemporary historians.

In recent months, however, the Act has come under what seems like a concerted attack from all three branches of the federal government — legislative, executive and judiciary — and there is a serious risk that information will flow less freely during the 1980s. This prospect alarms academics as well as liberal public interest groups and the press.

In Congress several bills have been introduced, with support from members of both political parties, that would allow various agencies to keep more information secret. The most glaring case is legislation sponsored by Democratic Senator Pat Moynihan and Republican Senator Malcolm Wallop, which would grant the Central Intelligence Agency almost complete exemption from the Freedom of Information Act.

The Moynihan-Wallop bill would allow the CIA to keep secret all its technical and operational files, including unclassified information which is now subject to the Act. The only exception would be that American citizens could still ask to see unclassified information held by the agency about themselves. Other bills, including a long-awaited CIA "charter" introduced by the Senate Intelligence Committee, contain similar — though slightly less sweeping — exemptions for the agency.

Since most politicians apparently feel that the CIA was bashed too hard during the 1970s and now needs to be "unleashed" from excessive restraints, there is a good chance that this session of Congress will indeed grant the agency a broad exemption from the Freedom of Information Act. That would be a disaster for contemporary historians, according to the two leading academic organizations in the field, the Organisation of American Historians and the American Historical Association, whose members have been lobbying against the proposals. Several recent scholarly books and many articles in learned journals have made extensive use of CIA information.

The legislative assault on the Freedom of Information Act is not confined to the intelligence agencies. Very recently the Senate passed a bill redefining the powers of the Federal Trade Commission, which would allow the FTC to keep secret much of the information it now has to make available to the public. The House of Representatives did not include the exemption in its version of the bill, so its fate remains to be decided by a House-Senate conference committee. As the Washington Post said in an editorial entitled "Carving up the FOIA," "what makes this proposal especially ominous is that other government agencies are waiting in the wings to see how it fares."

Meanwhile several agencies — including of course the CIA — have been interpreting the existing law in the most restrictive way possible. When individuals and groups sue for information withheld by the government, lower courts sometimes rule in their favour, but in cases that have reached the US Supreme Court the final decision has almost always supported the government.

The Supreme Court's two most recent rulings on the subject, announced on the same day in March, denied public access to the transcripts of telephone conversations Henry Kissinger had as Secretary of State between 1973 and 1976, and to research data gathered by university medical centres in the course of a federally financed study of diabetes.

However, it must be admitted that while the Kissinger decision provoked general dismay from the academic community, the second ruling was supported by the American Council on Education and the Association of American Medical Colleges. These groups argued that it would reassure researchers to know that their raw data would not be made public and they would not risk premature or inaccurate dissemination of their findings.

The case involved a request by a medical group, the Committee on the Care of the Diabetic, to see material collected in the course of a $15 million project known as the University Groups Diabetic Program, funded by the National Institutes of Health. The project's findings, which were used by the Food and Drug Administration to regulate certain drugs for diabetes, created a big medical controversy, and the Committee asked the NIH for the raw data, under the Freedom of Information Act.

The NIH refused, on the grounds that the data was not their property but belonged to the researchers. By a 7-2 majority, the Supreme Court agreed, ruling that the Act could not be used to extract materials from private researchers funded by a federal grant or contract.

The Kissinger case involved thousands of pages of transcripts that Mr. Kissinger removed from the State Department during his final months in office. He later deposited them with the Library of Congress, which is not covered by the Freedom of Information Act, on condition that they remain closed for at least 25 years.

Several groups, including the American Historical Association and the American Political Science Association, sued for access to the transcripts, which they said would provide the best background record of American foreign policy during the period. They argued that Mr. Kissinger wrongfully removed the transcripts, which were State Department property, and that they should be returned and opened to the public. But the Supreme Court decided that he had successfully removed the papers from the coverage of the Freedom of Information Act by taking them away from the State Department before anyone had a chance to apply for them.

Two justices, William Brennan and John Paul Stevens, dissented forcefully from the decision, which they said would encourage future government officials to avoid compliance with the Freedom of Information Act simply by removing materials to a place not covered by it.

Two weeks earlier the Supreme Court had delivered another blow against open government by deciding Frank Snepp violated his contract with his former employer, the CIA, by publishing a book (entitled "Decent Interval") based on his experiences as a CIA agent, without submitting the manuscript to the agency for prior approval. The book revealed no classified material. The court ordered Mr. Snepp to hand over all past and future profits from "Decent Interval" — it has made $120,000 already — to the CIA, and to clear any further books with the agency in advance.

Publishers and constitutional lawyers expressed dismay at the implications of the Snepp ruling, which they said could be used by the government to censor any past or present public employee, regardless of the Freedom of Information Act.

All these signs of backsliding are disturbing, of course — not least because they may be seized upon by enemies of open government in other countries where Freedom of Information legislation has been proposed — but I must emphasize that the main fabric of the Freedom of Information Act remains intact. Washington is, I repeat, still the most open of the world's major capitals.

Canadian academics denied visas?

U.S. immigration and refugee policy

The CAUT has received the following request from the American Association of University Professors. Those with relevant information should communicate directly with Mr. Knight at the AAUP office, One Dupont Circle, Suite 500, Washington, D.C., 20036, U.S.A.

Dear Dr. Savage:

Last year, the United States Congress established the Select Commission on Immigration and Refugee Policy to study and evaluate existing American laws, policies, and procedures governing the admission of immigrants and refugees to the United States. The Commission, chaired by Father Theodore Hesburgh, President of Notre Dame University, will hold hearings in New York on May 5. It is scheduled to make administrative and legislative recommendations to the President and the Congress by December, 1980.

The AAUP may wish to present testimony to the Commission with regard to the Immigration and Naturalization Act of 1952, commonly known as the McCarran-Walter Act, and its relationship to the academic community. We are especially interested in those sections of the Act under which persons intending to visit this country on non-immigrant status may be denied visas because of organizational membership, advocacy of political ideas, or the likelihood of engaging in activities viewed as prejudicial to the public interest or national security of the United States (attached are excerpts from the relevant provisions of the Act).

The United States Supreme Court in 1972 upheld the constitutionality of the Act. The decision, however, did not preclude statutory revision. Recent legislation has removed some of the barriers to the admission of aliens who have been denied visas solely because of membership in proscribed organizations. The recommendations of the Select Commission may lead to further legislative reform.

It is our understanding that foreign academics or other persons wanting to visit this country to attend scholarly meetings or conferences or to lecture to college and university audiences have, under the exclusionary provisions of the McCarran-Walter Act, either been denied visas or have encountered significant obstacles in obtaining them. It is our impression that these denials have been based almost exclusively upon persons' political beliefs or associations. We are concerned that these actions seriously impede the free discussion of ideas within the academic community.

In determining whether and how the AAUP might usefully contribute to the hearings conducted by the Select Commission on Immigration and Refugee Policy, we would be most grateful for whatever details you and your colleagues in the Association of University Teachers could share with us of individual cases over the past ten years in which persons wanting to visit this country for academic purposes have been denied visas because of their political views, or have only received them subsequent to an administrative determination to allow entry into this country despite an organizational affiliation. We are making similar requests of faculty associations in other countries.

Your assistance in this important matter would be most appreciated.

Sincerely,
Jonathan Knight
Associate Secretary
AAUP

Selected provisions from the McCarran-Walter Act

"Section 212(a). Except as otherwise provided in this Act, the following classes of aliens shall be ineligible to receive visas and shall be excluded from admission into the United States:

"(27) Aliens who the consular officer or the Attorney General knows or has reason to believe seek to enter the United States solely, principally, or incidentally to engage in activities which would be prejudicial to the public interest, or endanger the welfare, safety, or security of the United States."

"(28) Aliens who are, or at any time have been, members of any of the following classes:

"(A) Aliens who are anarchists;

"(B) Aliens who advocate or teach, or who are members of or affiliated with any organization that advocates or teaches, opposition to all organized government;

"(C) Aliens who are members of or affiliated with (i) the Communist Party of the United States, (ii) any other totalitarian party of the United States. . . (v) any section, subsidiary, branch, affiliate, or subdivision of any such association or party . .

"(D) Aliens not within any of the other provisions of this paragraph who advocate the economic, international, and governmental doctrines of world communism or the establishment in the United States of a totalitarian dictatorship . . . . .

"(G) Aliens who write or publish, or cause to be written or published, or who knowingly circulate, distribute, print, or display . . . any written or printed matter, advocating or teaching . . . (v) the economic, international, and governmental doctrines of world communism or the establishment in the United States of a totalitarian dictatorship.

"(29) Aliens with respect to whom the consular officer or the Attorney General knows or has reasonable ground to believe probably would, after entry, (A) engage in activities which would be prohibited by the laws of the United States relating to espionage, sabotage, public disorder, or in other activity subversive to the national security, (B) engage in any activity a purpose of which is the opposition to, or the control or overthrow of, the government of the United States, by force, violence, or other unconstitutional means."

NATIONAL NOTES

by Jill Greenwell (Relations with Government Officer)

Broad new initiatives in Nova Scotia

Research and development in Nova Scotia is going to get some attention in the coming months according to the recent Throne Speech by Premier John Buchanan. As part of the province's new industrial strategy, the government will be releasing a green paper, prepared in close consultation with the private sector, which outlines its plans for economic development.

In the meantime, however, the Department of Development has already established a task force, composed of 12-15 representatives from the university research community and industry to develop a provincial science policy. The task force, which is expected to complete its work before the end of this year, will in developing a green paper on science policy, invite public input on the general problems of research as well as technological development and technology transfer.

The provincial government has already written the new federal Minister of Science and Technology suggesting continuation of the discussions the Conservatives had initiated with all provinces on the coordination of R & D policies.

The Maritime provinces are also working collectively to identify various types of initiatives to promote growth in R & D.

Nova Scotia also plans a more aggressive stance in the manpower field. The Department of Labour will be renamed the Department of Labour and Manpower, and will assume jurisdiction over manpower programmes now scattered among several departments. They will be looking at the implementation of more effective manpower training programmes in general, and in particular at those areas where there are potential skilled manpower shortages, such as off-shore oil and gas activities and coal mining. The province's 20,000 small businesses have not yet been forgotten either. The government will be studying various ways to help managers and entrepreneurs with special advisory services, short courses given in small communities, correspondence courses, and the encouragement of more formal education and training.

U.S. case challenges legality of photocopying for classroom use

Seven publishers, backed by the Association of American Publishers and the Authors League of America, have launched a lawsuit against a photocopying company with outlets near several major U.S. campuses. The company is alleged to have sold 20 to 30 copies of entire chapters, complete journals or significant sections of textbooks, usually to professors for use in their courses. The case is the first challenge to photocopying brought under the revised Copyright Act which was put into effect in 1978. The act bans "systematic" copying. (Taken from Notes from AUCC. . .)

Brief rundowns on three new ministers

Despite reported protests by the Liberal association in the St. Paul's riding, Toronto's John Roberts has been appointed to the new Trudeau Cabinet as Minister of State for Science and Technology and Minister of the Environment. Educated at Oxford and Paris, the 47 year old former Secretary of State was defeated by PC Ron Atkey in May 1979 (former Minister of Employment and Immigration under the Clark Government). Mr. Roberts has previously held the positions of Programme Secretary to the Prime Minister, and Parliamentary Secretary to the Minister of Regional Economic Expansion. He has also been a lecturer at McMaster University and the University of Toronto.

Francis Fox (Argenteuil-Deux-Montagnes) is back in the Cabinet as the new Secretary of State. The former Solicitor General was previously Parliamentary Secretary to the Minister of Justice and Attorney General, and Special Assistant to the Prime Minister and to the Minister of Consumer and Corporate Affairs. The 41 year old M.P. is a member of the Quebec Bar Association and the Law Society of Upper Canada and has been a guest lecturer at the University of Montreal.

Health and Welfare gets Monique Bégin (St. Michel) again. Born in Italy and educated in Montreal and Paris, the 44 year old M.P. was formerly Minister of National Revenue — well known testing ground for new ministers. She has served as the Canadian delegate at a number of international conferences, and has held office in several national bodies including the Royal Commission on the Status of Women and the Canadian Human Rights Foundation.

A plea

The CAUT would be grateful if our members would raise with their Member of Parliament the need for a Canadian freedom of information act with a judicial review mechanism. Please let the CAUT know of any commitments made by your local M.P.

The University of Winnipeg

invites applications and nominations for

the position of

PRESIDENT

The president has general responsibility for the operations of the University and has such other powers and duties as are assigned by the Board of Regents.

The University of Winnipeg was officially established in 1967, but its history dates to 1871. Located in downtown Winnipeg, the University is a provincially supported, primarily undergraduate institution which retains affiliation with the United Church of Canada. Total enrolment is about 6000, almost evenly divided between full-time and part-time students.

The appointment will be effective July 1, 1981. The salary and terms of the office are negotiable. The successful candidate should have a proven record of senior responsibility in education, business, health services or public administration.

Applications should be accompanied by a detailed curriculum vitae and the names of several referees. Letters of nomination should include biographical details of the nominee. Applications, nominations and enquiries should be directed, before October 15, 1980, to:

J.K.A. Brown
Secretary
Search and Nominating Committee
University of Winnipeg
515 Portage Avenue
Winnipeg, Manitoba
R3B 2E9
Telephone 204 — 786-7811 Extension 437

Letters...from page 2

fluctuate more than in the additive model when the person's salary is high or low." (A.A.U.P., p. 15) Since the A.A.U.P. recommended the linear form as the simplest and most effective model, this was the method I followed.

It is true that a linear model cannot handle the problem of heteroskedasticity. However, Dr. Ilya Blum of MSVU's mathematics department and I did examine the salary residuals for normality and homoskedasticity and found no significant deviations. Nor were the residuals correlated with any of the variables used in the study.

I do agree with Professor Stelcner that a dummy variable should usually have the values (0,1). However, we found that separating the FYSTAT variable into two variables, FYMAS and FYDOC, made little difference to the coefficients. For example, in the equation printed in the *CAUT Bulletin* the coefficient of FYSTAT was $2940, implying a faculty member with a completed masters at date of hiring added an extra $2940 to his/her base salary while a person with a completed doctorate added twice that or $5880. The regression coefficients when FYSTAT was separated into FYMAS and FYDOC were $2496 and $3149, respectively. That is, a masters degree in hand added $2496 to the base salary while a masters plus a doctorate added a total of $5645. As one can see the coefficients are quite similar to those in the FYSTAT equation and so the use of this variable did not introduce significant errors into the results.

I appreciate Professor Stelcner's careful reading of my report and his detailed comments. I recognize that a salary study for an economics journal would need to be much more rigorous and specific than one I conducted at MSVU. However, this report was designed to be read and understood by faculty in general so that some of the rigour was deliberately omitted in favour of simplicity and readability. Perhaps one measure of its success can be the recent establishment of a salary anomalies committee at MSVU by our President, Dr. E.M. Fulton, which will examine faculty salaries for inequities and recommend to the President how these should be corrected. Certainly I believe such studies are worthwhile and strongly endorse Professor Stelcner's recommendation for a "set of on going empirical studies of faculty salaries at Canadian Universities."

Yours truly,
Lorraine Eden
President,
MSVU Faculty Association and
Assistant Professor of Economics

Literary publishing in danger

I am very concerned about what is happening in the publishing field in Canada. As a result of the bestseller mentality sweeping the industry and the book trade, serious literary publishing in Canada is in danger of collapsing or, at least, suffering a severe setback. Large presses are no longer interested in new work that is not commercial or in keeping our best books in print: Macmillan has discontinued the Carleton Library and seems to have given up on poetry and first novels; McClelland & Stewart is busy remaindering books by our best authors, books that were published with assistance from The Canada Council and other government sources. In the retail trade, chainstores no longer wish to stock small press books because they take time to sell. Writers can no longer expect their work to be given serious consideration by existing publishers.

Amidst the scenarios of doom and gloom, I believe it is necessary to make a gesture of faith in our own good sense and ingenuity as a culture. We need to ensure that the energy and excitement of the '60s and '70s, with which we associate the emergence of new writers such as Michael Ondaatje, Margaret Atwood, Alice Munro, and Timothy Findley, are not allowed to be dissipated by commercial exigencies or government shortsightedness. To this end, I have decided to try a new experiment in literary publishing — a subscription press which sells directly to the public books that are reasonably priced and attractively designed. QUADRANT EDITIONS has already begun the editing of its first manuscripts and will offer, in its first year of operation, 7 titles for $30.00 ($4.00 per title, plus mailing costs). Subscription fliers will go out soon in large numbers, asking anyone who is interested in good writing and in the survival of literary publishing in Canada to join with us in supporting this project. We intend to publish novels, short stories, poetry, plays, essays, and translations.

So far, our list includes a first book of poetry, *Signs Against An Empty Sky*, by Steve Hume, City Editor of the *Edmonton Journal*; a collection of short stories by Terry Byrnes of Montreal; a poem-sequence about Robert McAlmon and Paris of the '20s by Stephen Scobie, called *The Great Chinese Opera*; a collection of short stories by various Canadian writers; and a first paperback appearance of Bernard Epps' brilliant mythic novel of the Eastern Townships, *Pilgarlic the Death*. The list will include new work by established writers alongside important new books by previously unpublished authors.

The press will not only fill a gap at the moment, but also provide an example which could seriously alter small press publishing in Canada. Concordia University has expressed a willingness to help promote QUADRANT; The Canada Council seems very enthusiastic and willing to help once the press is fully under way; and numerous writers, including Frank Scott, Jack Hodgins, and Henry Beissel, have offered advice and assistance en route.

The first four books will appear from QUADRANT in September. If you are willing to send in your subscription now, or make a contribution to the press, make your cheque out to Quadrant Editions and send it to me c/o English Department, Concordia University, 1455 de Maisonneuve Blvd., West, Montreal, Quebec, H3G 1M8.

Sincerely,
Gary Geddes
Concordia University

Guide to

The Teaching Dossier

Its Preparation and Use

prepared by the Teaching Effectiveness
Committee of the Canadian
Association of University Teachers

Bruce M. Shore (McGill), Chairman
Stephen F. Foster (British Columbia)
Christopher K. Knapper (Waterloo)
Gilles G. Nadeau (Moncton)
Neill Neill (Guelph)
Victor Sim (CAUT)

with the help of faculty members of the Centre for
Teaching and Learning Services, McGill University

Report of the Teaching Effectiveness Committee

This committee has produced a draft document which we hope will aid in the development of faculty evaluation procedures in universities. This work has been conducted, with interruptions, over a period of five years. We are eager to receive comments, suggestions and reports on use of the *Guide to the Teaching Dossier: Its Preparation and Use*. We are especially interested in feedback concerning the utility and credibility of the various items in Parts 2 and 3.

One point we acknowledge in advance is that some points are repeated, probably too often when one is reading the entire document. We anticipate, however, that use of the *Guide* will be more selective and some of these concerns are relevant to more than one section.

With the information to be received from members (and others) the Committee will prepare a revision which will be presented to CAUT Council with a request that it receive appropriate endorsement and status as a CAUT document. At present the Committee asks only that this *Guide* be received and distributed for comment and reaction.

Additional copies are available from CAUT or any of the Committee members.

TO THE USER

The Six Parts To the Guide

Part 1 contains a general explanation of what a teaching dossier is and how it can be useful and even a necessary part of a curriculum vitae.

Part 2 is the most important from the point of view of a professor. It describes how to create a teaching dossier, including a "List of Possible Items in a Teaching Dossier."

Part 3 contains summary explanations of the items in the "List of Possible Items in a Teaching Dossier."

Part 4 contains elements of a sample teaching dossier.

Part 5 includes advice to administrators on the use of teaching dossiers for hiring, salary, promotion and tenure decisions, and on their relation to other parts of a professor's complete curriculum vitae.

Part 6 is a selected bibliography.

What is a Teaching Dossier?

A teaching dossier is a summary of a professor's major teaching accomplishments and strengths. It is to a professor's teaching what lists of publications, grants, and honors are to research.

The teaching dossier is intended to provide selected short descriptions that will accurately convey the scope and quality of the professor's teaching endeavors. The dossier may become a part of the curriculum vitae (CV) which describes teaching activities. Just as statements about research in a CV should be supportable by more complete evidence (e.g., published papers or actual research data), so statements made in a teaching dossier should be supportable by more complete evidence related to teaching activity. A teaching dossier would not normally be more than about three pages long, a reasonable amount to ask someone else to read.

Although reference is made to the "CV" throughout the *Guide*, it is recognized that universities vary in their requirements for the annual submissions from professors. Some, for example, use a standard Annual Report which the professor updates annually. The term "CV" is used throughout the *Guide* to refer to the document, whatever it is called locally, which the professor updates periodically to show cumulative accomplishments.

PART 1

EVALUATING PROFESSORS AND EVALUATING TEACHING

When a university evaluates the overall performance of its faculty it usually claims to pay attention to the four parts of the professor's role:

1. teaching,
2. research and scholarship,
3. participation in university governance, and
4. service to the community.

How are formal evaluations of research, governance, and service actually made? The professor may publish books and articles, perform, exhibit, speak at conferences, and be invited to appear as an expert. As evidence of success a written record of these events is usually compiled. With time, the professor becomes selective about what is recorded in the CV, summarizing lesser works with such statements as "and 10-odd other papers, reviews and talks." For both major and minor items backup material, such as copies of reports, papers and speeches is retained and offered as evidence of good work. There is wide respect for the right of the individual professor to decide how to organize the CV and what to emphasize in order to create the desired impression. Another commonly described part of a professor's work is contributions to the university's governance through committee and administrative service. These efforts are also recorded in the CV, with, for example, service on senate taking precedence over membership on departmental committees, and coordination of a major new program taking precedence over both. Similar summaries list the supervision of graduate students, the procurement of research grants and the provision of outside community service.

To sum up, in research, governance and service, the professor takes the initiative in keeping selective records of competence and effectiveness. This is done as much out of pride in accomplishment as in response to the need for material for evaluation. Even long-tenured full professors are typically able to produce an up-to-date CV on short notice.

The recording of competence and effectiveness in teaching is different from research or service. First, most professors do not keep good records of their accomplishments as teachers, even when they pride themselves on being first-rate instructors. More importantly, most do not recognize the need for taking the initiative in the area of teaching, but seem to regard the collection of information for the evaluation of teaching as the responsibility of others. There are multiple reasons for the failure of the professor to take the initiative in recording evidence of good teaching and several of these are reviewed below. One of the reasons is lack of knowledge about how or what to record, and it is the major purpose of the *Guide* to address this problem.

Before reviewing the evaluation of teaching in universities two assertions must be made about university teachers. First, it is indisputable that teachers generally do care about their teaching. Second, they are content to call themselves university teachers as well as chemists, historians and lawyers (as expressed in the title of the Canadian Association of University Teachers). The unabashed acceptance of these two assertions underlies the preparation of the *Guide to the Teaching Dossier*.

Just as obvious as the professor's personal concern about teaching is the general absence of evidence of good teaching in the CV beyond a list of course titles. If more information does exist, it usually consists of the results of student questionnaires which frequently are developed and administered without the direct participation of the professor concerned. The elements of personal selectivity and the opportunity to put a best foot forward tend to be absent; questions may not have been asked about many components of teaching that an instructor might wish to improve or know about well.

Evaluating the teaching of a professor is part of his or her overall evaluation, but it has not usually been accorded equal attention with the other parts of a professor's role. Why has the evaluation of teaching been undervalued by those who conduct evaluations? One reason is that professors conduct their research and service in a broader forum than they do their teaching, providing wider sources of possible information. In addition, as mentioned above, the professor has not learned to take the initiative in keeping a record of accomplishments in teaching. This in part may stem from the fact that the professor, even in graduate training, was taught to recognize and advertise success in areas of endeavor other than teaching. Graduate thesis work in research activity, seminars and preparation for comprehensive examinations sharpen skills in the presentation of ideas, and so on. He or she might well have held a teaching assistantship or actually have taught a course, but seldom was this teaching observed, evaluated, and tutored by the supervisor. Although there have been signs of change in some Canadian universities, teaching is still largely undervalued in graduate programs, except as a contribution to the teaching load of the department.

The professor can be put on the defensive when teaching is questioned. Defensiveness results in part from the professor's passive role in the process; others — students, committees, university administrators and occasionally government officials and agencies — often design and control the use of questionnaires or interviews and even delve into matters of course content and organization with which the professor has the most intimate involvement. This negative situation especially applies to students' attempts to make judgments about courses. It may also place constraints on the professors' freedom to collect unofficial, confidential, and tailor-made information to check how they are doing and how they might improve their courses or teaching. Part of the solution to such problems is to help the professor decide what information to collect for what purposes, how to do it, and how to present it. These are the main purposes of this document. Only when this is done will those charged with evaluating the professor's performance accord the teaching function its proper value.

It is very important to remember that the evaluation of teaching is a larger question than the assessment of the performance of the instructor alone. The professor ultimately influences only parts of the many variables that affect student learning and student satisfaction. Teaching successfully in the university involves great reliance on student motivation and ability as well as on the quality and cooperation of libraries, computing centres, laboratory supply companies and bookstores. It also requires overt support for teaching by one's university: teaching must receive direct and indirect support by public honors, sabbatical leaves, promotions, merit raises, and the like if it is to have the prestige accorded to other activities, particularly research, which compete for the professor's finite time and energy.

The *Guide to the Teaching Dossier* tackles only one part of the whole evaluation matrix. Specifically it seeks to describe ways for the professor to replace hearsay and general impressions about teaching, and to augment or replace as appropriate, opinions collected by questionnaires with other information indicative of competent teaching. In order to do this, the professor, in preparing his or her dossier, should clearly understand the distinctions among the three major purposes of evaluations outlined in the following section.

Purposes of Evaluation

There is a variety of reasons for evaluating teaching. The three most important for the individual professor are:

1. to improve the quality of teaching based on a knowledge of strengths and weaknesses,
2. to help students make choices among courses, and
3. to include teaching effectiveness among the criteria for making personnel decisions.

The first purpose of evaluation of teaching, and ultimately the most important to the teaching role of the university, is the improvement of instruction. Principal characteristics of evaluation conducted for this purpose should be that (a) data are collected early and often, not just at the end of a course, (b) results are confidential to the instructor, and (c) assistance is available to instructors to permit them to modify their instructional techni-

ques. Without such assistance gathering data is often counterproductive. The phrase "early and often" does not necessarily mean repeated use of forms and questionnaires, since there may be objections from students to the repeated paperwork.

The second purpose for evaluating teaching is to provide information for students to make course choices. The information is often obtained by questionnaire at the end of a course and is often essentially a poll of students' likes and dislikes. It may include impressions of course workload and the characteristics of the instructors. The questionnaire results are frequently published, sometimes with comments. Unfortunately such published evaluations rarely report the changes attempted in a course as the result of earlier evaluations, and they usually ignore the other previously mentioned influences on the quality of teaching. These evaluations are nevertheless useful for students, especially when detailed course guides are not available and students must rely on (usually inadequate) calendar descriptions, yet courses do change and even this utility is often short-lived.

The third purpose of evaluation is to include teaching effectiveness among the criteria used in personnel decision-making concerning contract renewal, promotion, tenure and selective salary increments for experienced faculty. For this purpose the evaluation of teaching is in greatest need of valid, direct input from individual professors. Administrators and peers rarely have quantitative information on which to assess the teaching performance of a professor other than that generated by student questionnaires. The *Guide* provides alternatives to such questionnaires and makes it possible for the professor being evaluated to be the focus of attention.

For the present the following points are simply stated as maxims. No professor should be expected to participate in evaluation on the basis of inappropriate or grossly incomplete criteria. Well-designed and appropriately used institutional evaluation procedures should be augmented by a personally prepared teaching dossier in which the faculty member "puts his or her best foot forward" when seeking advancement. Furthermore, this use of the dossier is occasional; it is secondary to the professor's continuing reflection on teaching responsibilities. The dossier approach to recording teaching accomplishments is intended partly to forestall compulsory teaching evaluation by questionnaire alone. Teaching is an often highly creative activity whose success is shown by a variety of data from different sources. There is also a tendency for some senior administrators and government agencies to measure productivity or output in higher education by such marginally relevant indices as teacher-student contact hours; they have little choice however, unless they are shown more academically appropriate methods of evaluation.

The teaching dossier is one comprehensive example of an evaluation activity much more likely to result in genuine "quality control" and sound morale than any so-called productivity measure. It is effectiveness that is the hallmark of a strong university, not efficiency. The university teacher with the aid of the *Guide* can add evidence of successful teaching to a portfolio of accomplishments in other areas. The portfolio will not grow indefinitely. Like a publication list, it will be selective, and the hard evidence to support the summary will be available when needed, like a copy of a publication. The *Guide* could also be entitled, "How to Add Evidence of Good Teaching to Your CV."

Summary of Advantages of the Teaching Dossier Approach

1. A record is kept of the professor's teaching accomplishments in the same manner as the record is kept of research accomplishments.
2. The professor is the editor. He or she takes responsibility for deciding to include some things and to exclude others.
3. When faced with a challenge about the quality of teaching, the professor takes the initiative in specifying some of the criteria by which he or she is to be judged. This will reduce the reliance on inappropriate criteria.
4. There is some probability that in keeping a record of effective teaching, the professor will make choices that make good performance more likely and be seen by others to be concerned with quality teaching.

PART 2

HOW TO CREATE A TEACHING DOSSIER

The purpose of Part 2 is to present to the reader six steps to creating a useful teaching dossier and to provide a List of Possible Items for a Teaching Dossier.

Before proceeding through the steps, two cautions are necessary. First, it must be stressed that the List, the product of the experience of more than one professor and intended for the use of a variety of teachers, is not a list of things the professor *must always do*. Rather it is a list of many possibilities from which the professor may select items most relevant to his or her teaching situation. The second caution is with regard to the use of the word "evidence". It might have been more accurate to speak of some items as providing "information that may be useful in evaluating teaching" and other items as providing "evidence". In the present context no distinction is made, since it was felt that most users of the *Guide* would be able to make their own judgments about how strong a piece of "evidence" was.

Step 1

There often exists between the professor and chairman or dean an agreement concerning teaching responsibilities and criteria for success. Whether the agreement is formal or informal the first step in preparing the teaching dossier is to summarize these mutual expectations in a short paragraph or two. Points covered might include understandings about the numbers and types of courses to be taught, how students are to be evaluated, and the nature of progress expected by students. Each of the sample dossiers in Part 6 begins with such a statement of agreement. Where such an understanding does not exist, the consequence could be arbitrary and shifting differences in these expectations.

Step 2

The List of Possible Items for a Teaching Dossier is examined. Should any item require clarification, Part 3 contains descriptions, rationales and examples for use of all items. Paying particular attention to the product of Step 1, the professor selects those items which are most applicable to assigned teaching and prepares a statement about accomplishments in each area. Item choice and use should also accommodate the professor's personal preferences and teaching style.

Step 3

The statements are arranged in the order which best fits their intended use. For example, if the professor is trying to demonstrate improvement in teaching, entries that in the short run lead to improvements would be emphasized, e.g., "Statement about quizzes and examination items being keyed to instructional objectives" (item 10) probably is more immediately useful than "Pursuit of a line of research that contributes directly to teaching" (item 24).

The statements may be organized in paragraphs or point form and under headings which draw attention to the importance of some items and to the supplementary nature of others. Brief elaboration or annotations are added to items which constitute major evidence.

Step 4

Full copies of all items referred to in the dossier are kept by the professor. These would include such things as examination outlines, original replies to course evaluation questionnaires, letters from chairman and students, and samples of student work. These materials are not part of the dossier, but backup in case "original" evidence is required.

To complete the dossier the professor adds a sentence which gives assurance that such materials are on file and are available on request.

Step 5

The professor inserts the completed dossier into the CV under the heading of "Teaching" or "Instruction". Precisely where it is placed in the CV in relation to the sections on scholarship and service should reflect the relative place of teaching among the professor's university responsibilities.

Step 6 (Optional)

When the professor submits the updated CV to a promotion and tenure committee, the CV may be accompanied by a few pages of materials which illustrate some of the major evidence referred to. An exemplary course outline, or reading list, an examination keyed to objectives, a numerical summary of student course evaluations or unsolicited letters of praise from students might be well worth sending along with the CV. The advisability of this step depends very much on local conditions.

Assistance May Be Available

Although the foregoing list is meant to be readily usable without assistance, there are advantages to seeking assistance from a teaching consultation service if one exists on the professor's campus. Such a service may be helpful in securing an agreement with the chairman when no agreement exists (Step 1), in selecting items for the dossier (Step 2) or in organizing the material propitiously (Step 5). Even if all the steps have gone smoothly, the professor might find it useful to request a confidential opinion on his dossier from a teaching consultant or a trusted colleague before submitting it.

One of the biggest problems in using evaluation data for personnel decisions is knowing how to set criteria for distinguishing between successful and unsuccessful teaching performance. A teaching consultation service may contribute its experience here. But, if squabbles over criteria are to be avoided, there is a very important stage to go through *before* the data are used for personnel decisions. In anticipation of such use, professors in cooperation with their administrators should gain personal, confidential, non-threatening experience in using the contemplated procedures for purposes of improving their teaching. Such experience is necessary for teachers to learn how to keep and use valid, even interesting, records of teaching, just as they now do for research. If this learning can take place before evaluation data are used for personnel decisions, much anxiety can be avoided and students will receive better teaching.

LIST OF POSSIBLE ITEMS FOR A TEACHING DOSSIER
(These items are explained in detail in Part 3.)

THE PRODUCTS OF GOOD TEACHING

1. Scores of students on teacher-made or standardized tests, possibly "before and after."
2. Student laboratory workbooks and other kinds of workbooks or logs.
3. Student essays and project or field-work reports.
4. Publications by students on course-related work.
5. A record of students who select and succeed in advanced courses or study in the area.
6. A record of students who are able to and do elect another course with the same professor.
7. Documentary evidence of effects on student career choice.
8. Documentary evidence of help to students in securing employment.

MATERIAL FROM ONESELF

Descriptive material on current and recent teaching responsibilities and practices.

9. List of course titles and numbers, unit values or credits, enrolments, and program applicability with brief elaboration.
10. Statement about quizzes and examination items being keyed to instructional objectives.
11. List of course materials prepared for students.
12. Information on availability to students.
13. Report on identification of student difficulties and encouragement of student participation.
14. Explanation of how films or other nonprint materials were used in teaching.
15. Steps taken to emphasize the inter-relatedness and relevance of different kinds of learning.

Description of steps taken to evaluate and improve one's teaching

16. Maintaining a record of the changes resulting from self-evaluation.
17. Reading journals on improving teaching and attempting implementation of ideas.
18. Review of new teaching materials for possible application.
19. Conducting action research on one's own teaching or course.
20. Attempts at instructional innovations.
21. Using general support services such as the Educational Resources Information Centre (ERIC) in improving one's teaching.
22. Participation in seminars, workshops and professional meetings intended to improve teaching.
23. Participation in course or curriculum development.
24. Pursuit of a line of research that contributes directly to teaching.

25. The preparation of a textbook or other instructional materials.
26. Editing of or contributing to a professional journal on teaching one's subject.

INFORMATION FROM OTHERS

Students

27. Student course and teaching evaluation questionnaire data which suggest improvements or produce an overall rating of effectiveness or satisfaction.
28. Written comments from a student committee to evaluate courses and provide ongoing feedback.
29. Unstructured (and possibly unsolicited) written evaluation by students, including written comments on exams and letters received after the course has been completed.
30. Documented reports of satisfaction with out-of-class contacts.
31. Interview data collected from students after completion of a course.
32. Honors received from students, such as being elected teacher of the year or most improved teacher of the year.

Colleagues

33. Statements from colleagues who have observed teaching either as members of a teaching team or as independent observers, or who teach other sections of the same course.
34. Written comments from those who teach courses for which the present is a prerequisite.
35. Evaluation of contribution to course development and improvement.
36. Statements from colleagues from other institutions on such matters as how well students have been prepared for graduate studies.
37. Honors or recognition such as distinguished teacher award or election to a committee on teaching.
38. Requests for advice or acknowledgement thereof by a committee on teaching or similar body.

Other sources

39. Statements from administrators from one's own institution or from other institutions.
40. Alumni ratings or other graduate feedback.
41. Reports from parents of students.
42. Reports from employers of students (e.g., in a work-study or "cooperative" program).
43. Invitation to teach for outside agencies.
44. Invitation to contribute to the teaching literature.
45. Other kinds of invitations based on one's reputation as a teacher (e.g., public media, interview for a book on exemplary teaching).

PART 3

EXPLANATIONS FOR THE LIST OF POSSIBLE ITEMS FOR A TEACHING DOSSIER

In the same order as the items were presented in the checklist above, here are descriptions, rationales and examples of use for each of the possible entries. As the possible entries vary considerably in complexity and content, the format is not completely uniform, but an effort has been made to keep the entries as consistent as possible.

THE PRODUCTS OF GOOD TEACHING

1. **Scores of students on teacher-made or standardized tests, possibly "before and after."**

Description: Class average or range of overall results with an indication of the standard by which these are to be judged, e.g., a high pass rate in a course with many failures in the past, or overall high scores perhaps with rank scores for performance on a national test. Poor performance on early tests can highlight later success.
Rationale: Student learning is the prime goal of teaching. Such results as these, however, are clearly influenced by selection of students, the difficulty of the content, and the quality of the examinations. Since most students succeed most of the time, these data should be offered when a teaching assignment is known to offer particular challenge and where it is agreed in advance that successful learning is indeed likely to be the result of the instructor's ability and effort.
Example: In the first year of offering a new genetics course to students without quantitative backgrounds, all students claimed nearly total ignorance of the content at the outset, but all passed (t0% receiving A) a final exam which had been prepared with the advice of the departmental curriculum committee.

2. **Student laboratory workbooks and other kinds of workbooks or logs.**

Description: Exemplary work noted in the dossier and partly appended. Additional attestation to the quality can be useful but is not necessary.
Rationale: Courses which are unconventional in certain circumstances (e.g., laboratory or internship courses where formal examinations and essays might be rare) may benefit from inclusion of excerpts of the type of student work which was regarded as excellent. This assures the reader that high standards are not compromised and is especially appropriate for technical or specialized skills which are unlikely to have been part of the entering student's repertoire.
Example: In an anthropology course on ethnographic methods in the study of social institutions, over the semester students acquired a professional degree of sophistication in recording and recognizing statements and incidents which provide insight into institutional functioning.

3. **Student essays and project or field reports.**

Description: In addition to the actual marks, these may take the form of appendices comprising excerpts of exemplary work.
Rationale: Like examination results, essays and reports are among the most common forms of student assessment. These excerpts should be offered when there is specific prior agreement that under particular circumstances such information would be regarded as the outcome of particular effort or ability by the instructor, and, even then, its inclusion might be optional (see Item 21 as a companion item).
Example: A section of a developmental psychology course reserved for students in the health sciences, and not noted by members of the department for producing written work comparable in quality to other sections, produces work which is an easy match. In particular this follows specific actions to improve the course.

4. **Publications by students on course-related work.**

Description: A short list of such accomplishments, either in a standard bibliographic format or a summary statement.
Rationale: While the quality of the work itself may be a result of factors beyond the instructor's input, publication is rarely achieved without encouragement and guidance from a professor. At the very least, it shows interest and attention toward high quality student work. This can never be required evidence and is even less likely in areas where journals are scarce. This information would likely be added to that for Item 9.
Example: One student project in this Ecology course has been accepted for publication by the *Journal of Ecology* (author, title).

5. **A record of students who select and succeed in advanced courses or study in the area.**

Description: A sentence noting the percentages of students completing a course who go on to further courses in the area and succeed therein.
Rationale: These data may be requested when a course's purpose is to recruit interest in a subject, or volunteered when continuation exceeds expectation. In either case a baseline of previous results is essential for fair comparison. Choice of honors or major programs could also be noted here.
Example: This biology course is prerequisite to all advanced zoology courses; 80% of students from my sections continue to further courses compared to 70% overall in the past five years of multiple sections, and none has failed an upper-level course.

6. **A record of students who are able to and do select another course with the same professor.**

Description: A sentence noting the numbers and courses involved, and mention of the entirely voluntary nature of the choice.
Rationale: This is information which can be volunteered by the instructor. It would be appropriately accompanied by data supporting high quality of student learning (perhaps high grades) and follows data on Item 9.
Example: Over the last 3 years 40 of the 105 students who have taken Course 111 have taken Course 222 in a subsequent term, the latter being optional for almost all of them.

7. **Documentary evidence of effects on student career choice.**

Description: Testimonials from employers or students about the instructor's influence in career choice, or conclusions in a departmental study of student careers which asks respondents to pinpoint particular courses which affected these choices.
Rationale: Within a discipline, such information when volunteered could be regarded by peers as evidence of enthusiasm and commitment. Its availability is likely to be fortuitous, but when available it need not be ignored.
Example: Appended is a letter from a major local industrial employment officer noting how many of the most promising candidates mentioned my name in the interview and expressing the hope to meet informally at some point.

8. **Documentary evidence of help to students in securing employment.**

Description: Similar to Item 7 above, with an emphasis on the positive hiring decisions based on the connections made to one's teaching.
Rationale: Also as in Item 7, with the added emphasis on esteem held in the community where graduates are employed (a particular case of item 42).
Example: Appended are the results of a post-graduation employment survey of graduates in which several students noted the thoroughness of their instruction in Course 423 as instrumental in meeting employment requirements in their field and in their moving ahead quickly.

MATERIAL FROM ONESELF

Descriptive material on current and recent teaching responsibilities and practices.

9. **List of course titles and numbers, unit values or credits, enrolments, and program applicability, with brief elaboration.**

Description: Slightly expanded calendar information, preferably also with a short paragraph describing the main topics, types of students, and types of student performance and development the course seeks to foster.
Rationale: This is basic but not very useful information in terms of evaluation. It can help to understand the baseline against which successful teaching is to be judged. It should nevertheless be brief and deal with recent or current teaching. Earlier teaching can be listed summarily.
Example: Current teaching: Educational Psychology 333, Creativity and its Development in School, half course option serving 36 students, 30 BEds and 6 BAs. The course surveys major psychological ideas of creativity, relations to intelligence, the question of generality versus special quality, and means to encourage creative performance in school children. Student work includes essays, term tests, and a field project with children. **Previous teaching:** Introduction to Statistics t01.

10. **Statement about quizzes and examination items being keyed to instructional objectives.**

Description: As titled.
Rationale: In courses where there is considerable detailed foreknowledge of learning which students are expected to attain, grades from such tests are usually valid indices of what students have learned. The absence of such connections might imply an element of greater arbitrariness in the evaluation of students.
Example: Courses 333 and 444 noted above (or below) include relatively well established areas of knowledge and skills which students are expected to master; all test questions are directly related to specific parts of the content previously covered in class or in assignments.

11. **List of course materials prepared for students**

Description: Laboratory manuals, course outlines, reprinted hard-to-get articles, worksheets, study guides, assignments, reading lists, supplemental topical reference lists, other handouts mentioned in a list, and audiovisual materials prepared or selected. These are items of which each student gets a copy (in contrast to Item 14).
Rationale: Provision of such materials is one possible index of preparedness in teaching. These may be anticipated by an administrator in looking ahead.
Example: A set of study questions is distributed at each lecture to provide students with probes from different perspectives which might not come out in the class, and to give an indication of the level at which I expect them to function on an assignment or test, or in seminar.

12. **Information on availability to students.**

Description: Statement of amount or schedule of time available to students outside of class and possibly of actual student use, perhaps supported by a logbook or appointment record.
Rationale: Some university teaching is highly dependent on such tutorial meetings which are much less visible than scheduled classroom teaching. Such teaching (e.g., in reading courses) should be noted in the CV in terms understood by others more accustomed to course numbers and the work they represent. In some cases, as well, quantity is a part of quality from the point of view of effort. Finally, such availability is important to students, however much or little use they make of it.
Example: In addition to the above courses, I spent approximately 4 hours per week during semester in individual tutorials with students outside of posted office hours comprising normally 3 mornings a week. Office hours of 6 hours a week have been extensively used.

13. **Report on identification of student difficulties and encouragement of student participation.**

Description: Summary of steps taken to identify students with special problems, to relate academic learning to appropriate contexts, and to design teaching and assessment procedures which facilitate student participation and learning.
Rationale: This catch-all item essentially seeks the special ingredients brought to teaching, whatever the preferred methodologies. Instructors have different strengths in their teaching and this is an opportunity to direct the attention of the reader or evaluator toward the contributions to teaching that each instructor considers to be most important. It is a critical topic for regular discussion about teaching with one's administrator, and helps form the criteria for judgment.
Example: As acknowledged in the department, one of my responsibilities is to teach students general problem solving in anticipation of using these skills in later courses. As part of Course 245 I have developed a "problem-creating" laboratory which is heavily used on a scheduled and drop-in basis. Alternative: in all the above courses I warn the students that I will in each lecture deliberately attempt to mislead them, at least once, and that their alertness is required to stay on track. For example,....Second alternative: In my general biology course a separate group with distinct assignments serves students who never took high school biology.

14. **Explanation of how films or other nonprint materials were used in teaching.**

Description: As titled.
Rationale: Appropriate use of such nonduplicated materials may be an index of preparation and attention to varying learning preferences among students. This item may be volunteered when it is expected to be regarded as positive, and is a suitable companion to Item 11.
Example: Video and audio cassette recordings of the authors studied, both performing their work and in general conversation, are available in the Library AV Drop-In Centre, and are used in several assignments.

15. **Steps taken to emphasize the inter-relatedness and relevance of different kinds of learning.**

Description: A short statement which describes how this is part of your approach to teaching.
Ratiunale: The teaching and learning of many subjects is enhanced when the social or personal relevance of the topic, or its relation to political, ethical, economic or other realities are acknowledged. This reduces the compartmentalization of course-based learning and shows students that specialized discussion is not unrelated to important issues of the day. This item could form part of a general introduction to the section of the CV on teaching, or be inserted with other notes about specific courses.
Example: Social and moral implications are highlighted in particular through films, field trips, and an annual debate with students of Professor PQR on social benefits.

Description of Steps Taken to Evaluate and Improve One's Teaching.

16. **Maintaining a record of the changes resulting from self-evaluation.**

Description: A short list of improvements made to courses and the manner of their presentation on one's own initiative.
Rationale: Recurrent attention to small but significant parts of one's teaching responsibilities is a useful indicator of concern with teaching. An item such as this should be endorsed by administrators since some instructors might feel that describing improvements might imply weakness. The data may be collected formally or informally.
Example: In recent years there has been a decline in the numbers of students with strong quantitative backgrounds and I have reoriented several early classes to include some of the relevant mathematical concepts in terms they can better understand.

17. **Reading journals on improving teaching and attempting implementation of ideas.**

Description: Brief statement or list of such journals regularly consulted, perhaps followed by an example of ideas gleaned.
Rationale: Such journals, in many cases devoted to specific disciplines, provide a link between scholarship in subject matter and concerns about how it is best learned (reference librarians and instructional development centres can assist in identifying and locating such journals).
Example: *The Journal of the Teaching of Chemistry* and *Improving College and University Teaching* are regularly read. The *Journal* is the source of the idea for the much appreciated videotaped demonstration experiments in the drop-in centre.

18. **Review of new teaching materials for possible application.**

Description: Brief mention of the consideration (and possibly published reviews thereof) of noteworthy new teaching materials (texts, films, computer programs, etc.).
Rationale: This item reflects involvement in ongoing curriculum revision, and awareness of new developments. Since most instructors consider new texts as publishers advertise them, an entry such as this should be limited to published reviews with a brief cross-reference, or to one's attention to new materials of evident importance in a field (e.g., "Chem Study").
Example: Relevant teaching materials have been formally reviewed (see publications list). Alternative: Consideration is being given in Course 325 to adapting a new set of single concept film loops produced by a committee of the Canadian Association of Art Professors.

19. **Conducting action research on one's own teaching or course.**

Description: A paragraph description of such study, or a cross-reference to a published report of it.
Rationale: Such studies can provide insights and confidence in conclusions more convincing than is possible in other approaches to making decisions about courses or teaching. The effort required can be defended when the outcomes have potentially large impact.
Example: This course was used to study the effect of students designing their own laboratory exercises. It was found that in most of the topics their plans were equally illustrative of the concepts, were safe in the use of materials, were enjoyed more in execution, and were better remembered at the end of the course. In a few topics, instructor-prepared exercises remained superior. Laboratories now include both types of exercises.

20. **Attempts at instructional innovations.**

Description: Summaries of procedures or materials adopted. This differs from Item 19 in that there need not be a connection to action research involving one's own teaching. These emphasize methodology over content but there is no mutual exclusion.
Rationale: Attempts to enhance teaching legitimately include adopting, permanently or on a trial basis, new ideas developed elsewhere. This item normally refers to relatively large and visible steps such as team teaching, computer-based instruction, or modularization of a course (original or purchased). It would follow a course listing.
Example: The unit tests in this course are administered and scored on-line by computer, from a pool of items taken (with permission) from the instructor's manual to the textbook. The facility also allows students to leave confidential questions or comments for the instructor to which replies can be given at class or placed back on the computer, appearing the next time the enquiring student signs on.

21. **Using general support services such as the Educational Resources Information Center (ERIC) in improving one's teaching.**

Description: A brief mention of the use made and outcomes, if any.
Rationale: This computerized information retrieval system (and others), contains a large number of project reports and other unpublished as well as published sources of ideas.
Example: An ERIC search for evaluation reports uncovered two similar clinical nursing programs whose approaches to unifying classroom and field experiences are now being examined here.

22. **Participation in seminars, workshops and professional meetings intended to improve teaching.**

Description: Brief mention. Where attendance is subsidized, this could also appear under "grants" in a CV.
Rationale: The realization that many instructors seek opportunities to exchange ideas about teaching has led associations and institutions to sponsor such meetings. Participation can refer to attendance or program contribution.
Example: Other activities in support of teaching included attendance at a workshop sponsored by the vice-principal's office on designing and grading essay tests.

23. **Participation in course or curriculum development.**

Description: A list of major involvement, possibly a cross-reference to the "committees" section of a CV. The emphasis is on the content of courses or programs.
Rationale: While this might also be regarded as a "service" contribution to a department, it is also indirectly one of "teaching".
Example: In 1979-80 I drafted proposals for the revision of the MBA program.

24. **Pursuit of a line of research that contributes directly to teaching.**

Description: Brief mention.
Rationale: While this occurence is partly fortuitous, it is a relation that can be sought. A professor's research is the high point of his or her own learning and the prospect of its sharing can be highly motivating to students.
Example: My research on the urban socialization of rural immigrants lends itself to many useful teaching adaptations. Students in the course visit homes and schools, and

guests address the class.

25. **The preparation of a textbook or other instructional materials.**

Description: A statement of it having been done with a cross-reference to the publications section for a text especially (also see Items 26 and 44).
Rationale: Such items are usually regarded as publications but they are a major contribution to teaching. The work may be in progress.
Example: My new textbook on endocrinology was published in January (see publications list). Alternative: With the support of a teaching improvement grant from the university ($500) I have prepared six of ten planned self-study units for this course.

26. **Editing of or contributing to a professional journal on teaching one's subject.**

Description: Brief mention of role and possible cross-reference to another section on editorial responsibilities (also see Items 25 and 44).
Rationale: Such activity has the potential to improve teaching and should explicitly support one's teaching contribution. Otherwise it risks being regarded solely in the "scholarship" category.
Example: I am an editorial reviewer for the *Journal of Engineering Education* as well.

INFORMATION FROM OTHERS

Students

27. **Student course and teaching evaluation questionnaire data which suggest improvements or produce an overall rating of effectiveness or satisfaction.**

Description: A note that such data have been collected and short summary of the results. A data summary should be appended to a copy of the questionnaire.
Rationale: Students are a most important source of data about a course, especially with regard to their attitudes. The exact nature of the data collected may be highly variable. Specific feedback from colleagues may supplement it.
Example: Student replies to a questionnaire (appended) indicated general satisfaction with these courses. Some dissatisfaction with overall workload led to a discussion with the class and a decision to more widely space the main assignments, requiring the first much earlier. Many students were also enrolled in Course 242 given by Professor ABC, and she and I have agreed to stagger the due dates of our main assignments in the future.

28. **Written comments from a student committee to evaluate courses and provide ongoing feedback.**

Description: Such a committee might represent a large course, program, department, or other group, and its regular input requested in the form of comments and suggestions, verbally and in writing. Comment noting good or improved work may be summarized and optionally appended (certa...ly kept on file).
Rationale: Large enrolments and other factors can sometimes make more intimate contacts difficult, a course or program student committee can provide valuable assistance.
Example: The course committee of four students met with me every two weeks and through their input several course improvements were immediately made, especially regarding opportunities for practising problems in class and changing one lecture a week to a problem tutorial.

29. **Unstructured (and possibly unsolicited) written evaluation by students including written comments on exams and letters received after the course has been completed.**

Description: As titled.
Rationale: These are usually the result of students ascribing their success or enjoyment directly to the instructor. One or more may be attached and the availability of the others noted.
Example: Three students have sent unsolicited letters about how this course has fostered their positive attitudes toward this discipline. One is attached and the others are available on request.

30. **Documented reports of satisfaction with out-of-class contacts.**

Description: Specific questions answered by students on a form or general notes may inform about a professor's effectiveness as a tutor, counsellor, or inspirer. References may be to office hours, appointments, sual contacts, or an assistantship.
Rationale: Learning does not all occur in the classroom nor is it confined to the content of the text.
Example: In addition to specific course responsibilities I have had much success in helping students choose supporting courses. This is supported by student replies to questions 10-13 on the appended course questionnaire.

31. **Interview data collected from students after completion of a course.**

Description: Summary of the comments given. The interviews may be recorded but this may deter some students; summary notes written afterwards can suffice. A random sample of students would be most appropriate in a large class. This method is suitable especially when the nature of the course has created good rapport with students and less personal questionnaires would not give the same quality of data. Students need not be interviewed singly.
Rationale: Once a course is completed and the marks submitted, students should feel free to express their opinions, and might well regard the intimacy of an interview as an expression of genuine concern.
Example: Questionnaire data were supplemented by interviews with four pairs of randomly chosen students. Their remarks reinforced the impression of the course being highly regarded but heavy, and valuable suggestions were received for reordering some of the topics so as to even out the load. Tapes and summary notes of these interviews are on file.

32. **Honors received from students, such as being elected teacher of the year or most improved teacher of the year.**

Description: Brief mention.
Rationale: This is a considerable honor at many universities and colleges. Though some scepticism greets such programs, the award is usually indicative of better-than-average teaching by other criteria as well.
Example: Elected Arts Teacher of the Year, 1977-1978.

Colleagues

33. **Statements from colleagues who have observed teaching either as members of a teaching team or as independent observers, or who teach other sections of the same course.**

Description: Summary of the reports.
Rationale: Peer review is an especially useful form of evaluation when there are concerns for such things as common standards of content (if not all details) and grading across sections of a course, or in a program sequence of courses. Professional ethics are well respected by asking that all reports give praise to points of excellence and specific suggestions for improvement.
Example: Peer review from previous instructors of this compulsory introductory course has particularly lauded the enthusiasm for the subject engendered in the students and offered only minor suggestions for improvements such as some revisions to slides. An appointment has been made with the media centre to carry this out.

34. **Written comments from those who teach courses for which the present is a prerequisite.**

Description: Summary of the comments.
Rationale: This is a special case of peer review but different in that it need not include direct observation of one's teaching nor examination of texts, teaching materials and tests. Replies may be solicited, part of regular departmental procedures, or unsolicited.
Example: This course is prerequisite to Course 411 and knowledge acquired is immediately used there. Professor BCD reports that students from this course are always well prepared, even after a summer break; she always has to schedule a few remedial tutorials for transfer and other students. These reports are on file.

35. **Evaluation of contribution to course development and improvement.**

Description: This may be provided by colleagues or a self-assessment as well, and it need not be restricted to one's own courses. It may commonly be a self report prompted by comments and invitations to assist.
Rationale: Comments on one's own course development and invitations to assist others with theirs are positive reflections on teaching ability.
Example: Professor CDE has asked me to help him prepare a set of field experience notebooks similar to those which have worked so well in this course.

36. **Statements from colleagues from other institutions on such matters as how well students have been prepared for graduate studies.**

Description: Brief summary with an example possibly appended.
Rationale: This item is similar to Item 34 on prerequisites. It is especially appropriate for senior specialized courses. The decision to include this item would likely be prompted by informal comments or a departmental survey indicating that useful data could be collected. A data summary may be optionally appended.
Example: Since over half the students who take this course continue to graduate work in the same or related areas, their new institutions are routinely polled a year later to assess the students' preparation. Strong satisfaction is the usual opinion.

37. **Honors or recognition such as distinguished teacher award or election to a committee on teaching.**

Description: Brief mention, possible cross references to "committees."
Rationale: This reflects colleagues' appreciation of one's contribution to teaching, and, in the case of such a committee, is not merely a "service role."
Example: Named to the University Teaching Improvement Advisory Committee for 1980-1983.

38. **Requests for advice or acknowledgement thereof by a committee on teaching or similar body.**

Description: Brief mention.
Rationale: This is another example of unsolicited recognition which if not recorded in one's own favor may usually pass unnoticed.
Example: The University Teaching Resources Centre conducted a poll of selected instructors on the adequacy of equipment of classrooms, to which I was asked to contribute by the Dean.

Other Sources

39. **Statements from administrators from one's own institution or from other institutions.**

Description: Brief summary and reference to originals.
Rationale: Administrators sometimes find a moment to express thanks for a good idea or special contribution. This item can be added to many others and is usually fortuitously obtained.
Example: Particular appreciation of my ideas on coordinating the laboratories of these three courses are expressed by the program director. The letter is on file.

40. **Alumni ratings or other graduate feedback.**

Description: Summary of the results of polls of alumni, much as one would do so for current students.
Rationale: There are times when the value of a course may be less apparent to current-

ly enrolled students than to those who have found their way to further study or work. Time and distance make such data harder to collect but the effort may be worthwhile.
Example: With the assistance of the Graduates Society Alumni Fund, addresses were found for 85% of the graduates of this course from 1970 to 1978. The replies of the 75% who replied indicated an increased and positive assessment of the value of this course to their work, in contrast to the opinions of current students whose outside experience remains too limited for this appreciation. I will be enquiring about some form of increased field experience to help students in this understanding.

41. **Reports from parents of students.**

Description: Brief summary of contents; usually unsolicited.
Rationale: While universities and students usually think of students as adults, officials responsible for student affairs receive frequent calls from parents. Since many parents pay the fees, and numerous students are legal minors, this is not surprising. Tutorial teaching and supervision are most likely to be so noted, or the report may be made to the alumni association in a university old enough to have served more than one generation.
Example: A designated donation for the department was received by the Alumni Association Parents Campaign, noting pleasure on their daughter's behalf with this course.

42. **Reports from employers of students (e.g., in a work-study or "cooperative" program).**

Description: As titled, usually in summary with a reference to the availability of details.
Rationale: Employers are one of the major constituencies of the university, in some fields more than others.
Example: Field-placement instructors not only shared in the evaluation of the students but were asked to complete a questionnaire about the course. Responses ranged from satisfied to completely satisfied, and useful suggestions were obtained to be implemented in 1980. The results are on file.

43. **Invitation to teach for outside agencies.**

Description: Brief note of the offers and which were taken up.
Rationale: Other universities, community and professional associations rely partly on reputations of teachers to recruit evening and summer instructors.
Example: I have been asked to give in-service and summer courses by the following organizations. Those marked with an asterick were taken up and are listed under "external consultation."

44. **Invitation to contribute to the teaching literature.**

Description: Brief note of the offers and which were taken up.
Rationale: Like offers to teach outside, there may be more invitations than can be taken up and then listed under "publications" or in Items 25 or 26. These reflect favorably on one's teaching. As with some other items, the inclusion of this one is usually not planned in advance. If all offers were taken up, Items 25 and 26 might be more appropriate means of inclusion in a CV; they can be annotated as "by invitation."
Example: I have received the following unsolicited invitations to contribute to the literature on the teaching of second language literature. Those marked with an asterisk were taken up and are listed under "publications."

45. **Other kinds of invitations based on one's reputation as a teacher (e.g., public media, interview for a book on exemplary teaching).**

Description: Brief note of the offers and which were taken up.
Rationale: Word of good teaching may escape academia and it need not be ignored once out.
Example: I have been asked by the CBC to do three summer replacement shows for "Science Report."

PART 4

ELEMENTS OF A SAMPLE TEACHING DOSSIER

This is part of a hypothetical professor's teaching dossier. The instructor is not completely typical, and that is intentional, so as to illustrate the flexibility of this approach.
The most frequent problem in preparing the teaching portion of a model CV is that it is impossible to be as quantitative as desirable on some items. For example, Professor X undertakes to provide a full course syllabus in the first year of a new course — an effective way to assure thorough planning. Doing it is sufficient, and there are many ways to ensure the quality of the syllabus, e.g., asking colleagues for comments. More difficult are cases where student success or questionnaire results are agreed upon as suitable means of assessment. If criteria for satisfactory teaching performance are not set in advance, there can be a serious dispute at the wrong time. It would be much better to acknowledge an unsatisfactory level and permit a chance to improve it, or to collect other corroborative or challenge data. *It is therefore wise to try out evaluation procedures in a nonthreatening, confidential, improvement context so as to be able to agree on reasonable criteria when similar data might eventually be needed for a personnel decision.* On a campus where there is a teaching improvement or evaluation service, such experience may be readily at hand.
The examples below are intentionally vague, because real circumstances vary so widely. This whole section is illustrative of only parts of the Teaching Dossier.

* * *

Teaching

In the past three years my chairman and I have exchanged memos following discussions at which we agreed on my teaching responsibilities and the expectations for teaching performance therein. In this past year I relinquished a second-year course I had taught for several years and started a new introductory course for non-linguistics students. A slightly easier exam was to be set than in the standard course. I continue to teach the compulsory psycholinguistics research methods course to honors students and an optional intermediate course in Canadian French dialects. Performance of the methods students was to be judged by their subsequent performance. The dialects course is primarily an interest course and student motivation was to be a major factor in assessing its success. I was to continue a slightly heavier than average supervision load.
We agreed therefore on the following obligatory elements in the evaluation of my teaching, to which I have added others which could not be anticipated.

Overall: List of courses, etc. (see Item 9)
Linguistics for nonspecialists:
- Scores of students on teacher-made tests (the questions to be reviewed by the instructor of the regular course). (__% minimum pass rate) (section 1)
- Provision of a complete course syllabus. (see Item 11)
- Particular attention paid to student difficulties. (see Item 13)
- Student satisfaction at a "moderate" level or higher on a questionnaire (moderate being 3 on a 5-point scale). (see Item 27)

Honors Psycholinguistics Research Seminar:
- Examples of graded student laboratory records. (see Item 2)
- Comments from colleagues on prerequisite preparation indicating little need to reteach major concepts. (see Item 34)

Dialects interest course:
- Examples of graded student essays showing best average, and worst work. (see Item 3)
- Integrating my research with this course through students collecting and analyzing tapes of speech at the airport and railway station. (see Item 24)
- Student satisfaction at a "4" level on the average on a 20-item questionnaire including the 10 departmental "core" questions. (see Item 27)

Linguistics 345: Canadian Dialects

This being an optional course, the standard for student satisfaction was set high. Results of the course questionnaire confirmed considerable satisfaction, particularly with the field exercises which were closely related to my own research (computer summary printout appended — especially see questions 11-14). The students were required to write a report on their mini-studies to each interviewee who volunteered a name and address (five of thirty wrote back to thank us for that thoughtfulness).
Only one poor essay was submitted, all the others being "B" or better; excerpts are appended.
The final test was used by ten of the eighteen students to write special notes of thanks for a course which they felt did an unusual job of making an esoteric and theoretical topic enjoyable and relevant. These comments are appended. (see Item 29)
All complete documents referred to are available if requested.

Overall

In addition to the regular teaching assignment, I also:
(a) served on the MA program revision committee, (Item 23)
(b) attended two workshops at the Teaching Improvement Centre, one on course evaluation and the other on making multiple-choice tests, (Item 22)
(c) wrote two chapters of a text on Canadian dialects, (item 25) and
(d) interviewed the students doing best and worst in each of my courses as one way of discovering what makes the courses succeed and fail for different students. Several science students suggested calendar revisions because after they discovered that the course content was not what they expected they were locked in by timetable conflicts. I was able to advise them to raise such matters sooner out of class because it is often possible in such an optional course to adjust the content to better suit such students if that is the real problem.

* * *

Essentially the Teaching Dossier expands the usual few lines of course numbers and titles to one to three pages of **data-based** evaluations of the quality of the teaching therein, with a few appendices. Unless such data exist and are the basis of the judgments made, teaching cannot be considered to have been evaluated in the course of the evaluation of the professor.
Unless there is concurrence with administrators about the central content of such data and the criteria to be met then the evaluation cannot be considered to have been conducted equitably or effectively. The Teaching Dossier also serves as evidence of this due process.

PART 5

ADMINISTRATIVE USE OF THE TEACHING DOSSIER

Two major issues are addressed in this section. It begins with further discussion of an issue raised in Part 2, that of distinguishing between using the teaching dossier for personal purposes such as teaching improvement and using it for personnel decisions such as renewal, promotion and tenure. This is followed by a discussion of the issue of universities' acceptance of the teaching dossier as valid evidence of the quality of teaching. The latter includes a discussion of the need for administrators to become personally aware of and sup-

portive of the approach to teaching evaluatio.. represented by the teaching dossier. Neither issue will be resolved instantly, but an important virtue of the teaching dossier is that it can be added to current evaluation practices with virtually no disruption.

Faculty members can only benefit by the exercise of reviewing their teaching. The review process should expose them to shortcomings in their teaching and to alternative ways of approaching teaching. Unfortunately, if the teaching dossier were used for only these purposes, it might not gain widespread acceptance. This is at least in part because using feedback about teaching to make improvements in course content or the manner of its presentation is to a considerable extent a private matter. Its main attraction to most professors will more likely be the chance to describe and justify their teaching accomplishments when it comes to tenure, merit and promotion hearings.

There is no easy way to predict just how the teaching dossier will be used. However, there appears to be widespread dissatisfaction with the most common current procedures for evaluating teaching, namely gossip or oversimplified results of student evaluations. It may well be that when faculty incorporate their teaching dossiers into their curricula vitae, administrators will pay careful attention to this information because it fills a vacuum among the current bases for performance review. In other words the mere use of the teaching dossier by numbers of faculty should accomplish something, especially if it is coupled with repeated and clearly made requests that the evidence be considered by the appropriate review body. Obviously, this kind of use of the teaching dossier requires public policies (departmental, faculty, university) to assure equitable treatment. Such equity is not achieved by demanding exactly the same data from each instructor because teaching responsibilities differ in many ways across the professoriate. It is enhanced by having agreed-upon procedures which allow individual professors to express their teaching accomplishments, the unique aspects of their teaching, and the variety of reliable data which might be available. Private as well as public reements are necessary about the inclusion of a teaching dossier in a CV. The dossier should also be regularly, perhaps annually, brought up to date.

The second issue to be addressed in this section is the probability of universities' acceptance of the teaching dossier as valid evidence. The point has already been made that the mere usage will increase the awareness of personnel decision makers. In addition, its use may be raised as a matter of policy and general discussion in various university assemblies such as academic departments, the faculty association and senate. This tends to increase everyone's awareness. But a teaching dossier will have its intended effect only when personnel decision makers and teaching faculty come to trust the approach. The most important element in the validity and success of the teaching dossier approach is the regular (perhaps annual) exchange of views between an administrator and each of his or her instructors about teaching responsibilities in the time ahead, the ancillary duties related to teaching, and indeed any of the List of Possible Items for a Teaching Dossier, with the opportunity for the later addition of other relevant data. Such a discussion should touch not only on expectations, but also on the manner of their reporting. If there is any potential danger in the evaluation of teaching, it is that the administrator will say to the instructor that the data submitted do not represent areas of prime concern for teaching success and perhaps even cover up areas of suspected weakness. Such conflict is extremely unlikely with a regular discussion such as proposed, especially when the discussion was documented by an exchange of memos. The teaching dossier used in the foregoing manner becomes an important and trusted instrument for looking forward, and this gives it the greatest possible strength at a point of review. By providing flexibility and a large range of options it is also widely adaptable across parts of the university.

The biggest problem in any evaluation is deciding the criteria by which decisions are to be made. The teaching dossier, when guided by prior discussion as described above, includes both criteria and a procedure for answering them. There are some questions of criteria that go beyond the teaching dossier, however, such as what level of performance might be expected of students or the value of ratings given by students. These are parts of a more technical step which on increasing numbers of campuses can be aided by a teaching consultation service.

Finally, the submission of teaching dossiers as a part of CVs will be facilitated if university assemblies at different levels — which may already have specified that teaching shall be a part of the evaluation of any professor — at least note the teaching dossier as described in this report as an acceptable format for providing this evidence. Such assemblies could well require the dossier as evidence, and this would be the Committee's preference. Most importantly, however, such assemblies could make a major contribution to the validity of evaluations of teaching by simultaneously requiring the annual preview based on the dossier and the alternatives it offers, as described above. The teaching dossier approach is intended to be usable independently by individuals and institutions, but we note as a point of advice that the successful implementation of effective evaluation procedures will be aided by the identification of support for and expertise in evaluation on campus. Where this support [illegible] be given to identifying it and making it available.

PART 6

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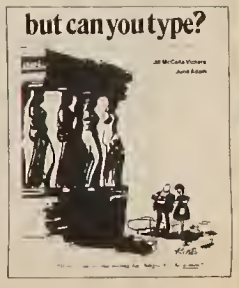

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Statistics refute author's conclusions

Room at the Bottom

by Bruce W. Wilkinson

Room at The Bottom: Job Mobility Opportunities for Ontario Academics in the Mid-Seventies by Linda K. Moffat, Toronto: The Ministry of Colleges and Universities, 1980. Pp. viii, 251.

This report examines the characteristics of those people that either obtained or left academic jobs in Ontario in 1974 or 1976. It is based upon the processing of detailed questionnaires received back from over 750 of the 3500 academics who altered positions in these years. The main conclusions are: "Thus the problem of the job market for new PhD's in Ontario is not one of over production, but of a bias against Canadian trained PhD's" (p. 187). And a little further on, "Thus the new PhD's are being offered a series of short term, non-tenure stream appointments and after seven years their academic career is terminated. There is only room at the bottom of the system" (p. 190). These are strong statements. Does the evidence presented support such statements? In the judgement of this reviewer it does not.

The main body of the study consists of eight chapters. The first one outlines the well-known financial constraints which universities find themselves in today as enrolments taper off and government funding based upon enrolments (and not sufficiently adjusted upward to cover inflation) does the same, and as general government support for research and development in Canada remains inadequate, even declining as a percentage of GNP. Chapter two describes the sampling procedures and sample characteristics. The ensuing three chapters use the sample results to provide, first, an overview of academic job mobility in 1974 and 1976; then, detailed characteristics of those moving from one university to another in these years (comprising 36 percent of the sample), those who were students and were moving into academic job market (accounting for 37 percent of all "arrivers" or 22 per cent of all "arrivers" and "leavers" combined), and those intersector people moving from outside the university to a university teaching or research position or vice versa, including those retiring and dying (making up the remaining 42 percent of the sample). Chapter six examines the perceived costs and benefits of these various moves by the participants, while chapter seven consists of a model involving the use of OLS regression and logit analysis to attempt pin-pointing the precise characteristics of those receiving tenure-stream contracts in 1974 and 1976. A summary discussion and conclusions of the nature cited above are provided in chapter eight. Several appendices offer details of the covering letters to the people sampled, the questionnaires and the answer codes.

Obviously a tremendous amount of time, energy and skill was utilized in defining the sample to reflect suitably the total population under review, and in devising, mailing, following-up and tabulating the questionnaires. These preliminary tasks may have sapped the researcher's energies, for the same care does not seem to have been expended in analyzing and presenting the results. Not infrequently an observation is made about material in a table which helps support the author's bias, while other items in the table which would support an opposing view are ignored. It is specifically noted, for example, that 80 percent of arrivers at the associate and assistant ranks were not promoted upon arrival. But no attention is drawn to the fact that the same table shows that from 1974 to 1976 the proportion of assistants being promoted rose from 8 to 21 percent while the proportion of those ranks below the assistant level that were promoted when appointed rose from 58 to 64 percent (Table 4.5).

Again, there is seldom any discussion or analysis of why results are as they are presented. To illustrate, in chapter three we are shown that per capita mobility is highest in Laurier, Laurentian, Lakehead, Windsor, Brock and Western in that order (Table 3.3). Yet, apart from listing mobility rankings alongside rankings in terms of new jobs created (and these two are by no means the same; I computed the Spearman rank correlation coefficient to be .044) no attempt is made to probe why mobility rates differ among universities. Elsewhere in the study we are told that geographic location is important to many academics. Did this play a role in the varying turnover rates? Or is it that the higher turnover universities are attempting to upgrade their staff more vigorously by demanding more and better quality research and publications before granting tenure? Or are the various universities under different financial constraints because of having diverse mixes of graduate and undergraduate students, and/or rank structures more skewed towards the higher or lower ranks? Or are the university strategies for coping with financial difficulties simply different from each other? None of these types of questions are ever broached.

No exploration

Another illustration is that we are told that "Windsor, Toronto, and Laurentian hired far more heavily from the U.S. than other universities in the study." We are not given precise numbers or proportions and no systematic exploration is made of why this has occurred. Elsewhere in the volume it is mentioned that "stars" are hired from abroad. In another place reference is made to appointments occurring via contacts of existing faculty with faculty abroad — the "old-boy" or "old-school-tie" type of network. Careful probing and statistical analysis might have made it clear whether these types of considerations were important in the behaviour of Windsor, Toronto, and Laurentian.

It would also have been nice to have had *some* recognition somewhere in this study that market forces must be allowed to work, at least in part, rather than the reader just being left with innuendos that some nasty plot must be going on with respect to this or that group. Those in the humanities appear to be in a less advantageous position than those in the social sciences. There are, on average, relatively fewer jobs for them than for the social scientists, and they contribute a disproportionately large number to the group that register high job mobility. Yet, this is to be expected and is surely as it must be if the demand for social scientists is stronger, relative to supply than is the situation for those in the humanities. While it is true that a case could be made for ensuring that there is an adequate supply of academic talent available to meet the needs of universities without massive immigration as enrolments begin to expand again late in the 1980s or 1990s, it is not true that everyone who wants an academic position should be assured one, as this report implies on occasion (pp. 136, 189-190).

One must also have some reservations about the analysis of chapter seven which looks at the characteristics of those receiving tenure track appointments.* The author lumps together all observations for 1974 and 1976, for all Ontario universities except Toronto, for all ranks, and distinguishes only three broad academic disciplines — humanities, professional and other. The conclusion she makes the most of is that to be a Canadian seems to lower the probability of getting a tenure-track contract. She had to work at this one, though, for "simple inclusion of citizenship and bir-

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thplace produced inconclusive results (p. 176). Instead she developed some composite variables of "degrees of Canadianness" entailing birthplace, citizenship, and country where the undergraduate degree was taken.

Given the information provided elsewhere in the document, one wonders whether separate regressions for each of the years 1974 and 1976, by rank, possibly by individual disciplines, even by universities, so as to identify changes in structure between the two years and to test for significant differences in coefficient values would have produced additional insights and even noteworthy variations in results. Certainly no dirth of observations exists which would preclude this more detailed testing. (One unexplained feature in this regard is that 1179 observations were used in the regressions, whereas there were only 764 usable responses in the sample).

Consider the reported (and modest) anti-Canadian bias in the giving of career-type appointments. This is surprising, after the information offered elsewhere in the paper. In 1976 about "70 per cent of new appointments at the assistant level went to Canadian citizens" (p. 58). "Movers are also less likely to be Canadian citizens than are non-movers" (p. 56). "American PhDs were the modal category for leavers (48 per cent)" (p. 60). "...in 1974 48 per cent of the arrivers came from U.S. universities while in 1976 only 25 per cent came from U.S. universities" (p. 85).

If separate analysis had been undertaken for each year, it is conceivable that an improvement might have been observed for Canadians in 1976 over 1974. Again, if the regression runs had been done for each rank separately, then the tendency to hire "stars" may well have shown foreigners to be favoured at the full professor rank, but at the associate level, and more particularly the assistant rank, the anti-Canadian bias may well be non-existent. It would be well worth doing this analysis before we accept the results reported to date.

Notice too that we should be careful in decrying the hiring of "stars" from abroad. Surely this is a sound way of improving the quality of university teaching and research and avoiding the abuses of inbreeding — something the author raises concerns about on occasion.

A different perspective

We should also be careful not to get too upset about those changing jobs and those leaving academia. The results summarized in chapter six, but which seem to be forgotten by the time chapter eight is written, indicate a different perspective. Eighty per cent of arrivers and leavers felt that their professional careers were well-served by their shifts in jobs (p. 155); of those who left academia altogether, 84 per cent were unhappy in their academic jobs (p. 146); those leaving jobs, when asked the reason, made five "pull" comments for every "push" comment; in other words attractions of the change were far more important reasons for leaving than being pushed out by the universities. "...the inter-sector leavers...most frequently report greater happiness and personal satisfaction as direct consequences of their job change" (p. 168). These inter-sector leavers also had low volume of publications. (Contrast this with the fact that of the students who received jobs, 79 per cent had published in Canadian, U.S. and other journals and 82 per cent presented papers at meetings) (p. 110). In summary, then, those leaving academia, rather than simply being Canadians who were being thrown out of the university environment by some anti-Canadian hiring policy of universities, were people who were generally unhappy in their university careers and, for one reason or another, not given to research and publication (one of the key functions of academics), and who commonly found greater personal happiness by leaving the ivory towers of learning.

The report frequently quotes replies from particular respondents which support the theme the author develops. But given that many of the statistics paint a different story, I am inclined to treat them with a certain amount of skepticism. Still, though, they provide a certain amount of comic relief on occasion. I liked the one from the academic-turned-consultant who was "not finding much time to be a potter". (It is not clear whether pottery is his profession or his hobby). Then there was the person who left out of his application form for a non-academic job, information on his higher degree and the years spent in obtaining it, for fear he would be considered over-qualified for the job at hand. The interviewer asked him if he had spent the unlisted years "in prison or in a psychiatric hospital".

All this is not to say that the study makes no contribution to our knowledge. It contains many interesting pieces of information. But much work remains to be done in analyzing the data before one can have a clear picture of the true situation regarding the academic job market and the forces operating on it. Nor are my comments meant to suggest that all is well in academia today. Clearly it is not. If universities are to meet satisfactorily the needs of a decade hence, when enrolments begin to climb again, and if Canada is not to slip further behind other nations in its research and development performance and general technological capacity, governments need to undertake now some very basic thinking with respect to the financing of universities and R & D strategies. Otherwise, Canada will have to resort once more to its traditional, short-sighted, fire-figbting approach to universities and technology for the future. Surely we can do better than that.

Yet, unless the presentation of the problems and concerns is much more incisive, internally consistent and convincing than this study is, I am afraid the message will not get through to the decision-makers.

*I am indebted to my colleague, Al Jenkins, for a helpful discussion on this section.

Professor Wilkinson is with the Department of Economics at the University of Alberta.

BAYERO UNIVERSITY, KANO

(A) Department of Biological Sciences
Reader
Senior Lecturer
Lecturers in the following areas:
(a) Cryptogamic Botany
(b) Plant Taxonomy
(c) Plant Ecology
(d) Developmental Botany
(e) Fisheries
(f) Animal Physiology
(g) Animal Histology & Embryology
(h) Entomology
(i) Microbiology
(j) Hydrobiology & Pollution

(B) Department of Chemistry
Senior Lecturer
Lecturers
Special needs exist in the areas of physical and industrial Chemistry, but applicants in other areas may be considered.

(C) Department of Mathematics
Senior Lecturer
Lecturers
Special consideration will be given to applicants ready to teach a wide variety of subjects.

(D) Department of Physics
Senior Lecturer
Lecturers
Areas of interest include: Electronics, Acoustics (physicel and applied), Thin-film, Surface Physics, Theoretical Physics perticulerly solid end liquid stete.

(E) Department of Political Science
Professors
Senior Lecturer
Lecturers in the following erees:
Reseerch methods in Politicel Science.
Nigerien Government and Politics.
Normetive or Classical Theory.
Empirical Politicel Theory.
Public Administration.

UNIVERSITY OF NIGERIA, NSUKKA

(A) Department of Music
Senior Lecturer
Lecturers/Assistant Lecturers
Senior Tutor
Tutor for Pieno
Tutor for Woodwind
Tutor for Bress

NOTICE OF VACANCIES IN NIGERIAN UNIVERSITIES

UNIVERSITY OF SOKOTO

1. **Faculty of Arts & Islamic Studies**
Professors
Readers
Senior Lecturers
Lecturers and
Assistant Lecturers in the following Departments:

(A) Department of Arabic
Excluding Senior Lecturer.

(B) Department of History
Senior Lecturer end Lecturers only.

(C) Department of Islamic Studies

(D) Department of Law

(E) Department of Modern European Languages

(F) Department of Nigerian Languages

2. **Faculty of Education and Extension Services**
Reader
Senior Lecturer
Lecturers end
Assistent Lecturers in the following Departments:

(A) Department of Education
Except Assistent Lecturers

(B) Department of Extension Services
Except Reader, but including Extension Organizer.

3. **Faculty of Science**
Reader
Senior Lecturer
Lecturers and
Assistant Lecturers in the following Departments:

(A) Department of Biological Sciences (Botany)

(B) Department of Biological Sciences (Zoology)

(C) Department of Chemistry

(D) Department of Mathematics

(E) Department of Physics
Including Professor

4. **Faculty of Social Sciences & Administration**
Professors
Readers
Senior Lecturers
Lecturers and
Assistant Lecturers in the following Departments:

(A) Department of Economics & Management Studies

(B) Department of Geography
For Senior Lecturer and Lecturers only.

(C) Department of Political Science
Excluding Senior Lecturer.

(D) Department of Sociology
Excluding Professor and Assistant Lecturer.

5. **College of Medicine**
Professors end
Readers

FURTHER DETAILS concerning quelifications, sub fields of specialty end experience required, conditions of service, and methods of epplication, cen be obtained, on epplication, from the:

Director
Nigerian Universities Office
320 Queen Street
Place de Ville
Tower 'A'
Suite 2210
Ottawe, Onterio
K1R 5A3
Canede

Enquiries for further details should state: Neme of University es well as Post and Special Field of Interest.

BRANDON UNIVERSITY

Faculty of Education,

POSITION	Faculty Member in School Administration, Northern School Administrators Training
RANK:	Assistant Professor of Education
QUALIFICATIONS:	Doctorate preferred. Minimum of Master's in Educational Administration/Curriculum. Experience as successful school administrator in native/remote/rural community. Fluency in Cree or Saulteaux definite asset.*
POSITION DESCRIPTION:	(1) Teach Educational Administration or curriculum courses for Native/Northern School Administrator trainees. Courses will include legal aspects of Educational Administration and professional principals seminar as well as others to be arranged. (2) Coordinate placement of students for administrative practicum. Supervise and assess practicum participants. Supervisory travel is required. (3) Serve as coordinator of trainees, counsel on academic and professional matters. (4) Ability to interface between university/native communities/Department of Indian and Northern Affairs and other organizations.
SALARY:	Negotiable, in accord with qualifications and experience.
STARTING DATE:	1 July 1980.
APPLICATION DEADLINE:	30 May, 1980.
LETTERS OF APPLICATION:	Send curriculum vitae and three letters of recommendation to:

Dr. Dale T. Hayes, Dean
Faculty of Education
Brandon University
Brandon, Manitoba, R7A 6A9

*Secondment from public or governmental educational system to position will be considered.

Philosopher's warfare

...from page 11

that there is nothing to hide where nothing illegal is being done.

One western academic, Professor Therolf Rafto, from Sweden, who met Tomin, was actually arrested and thrown out of the country, although he had long been an outspoken critic of the regime. But perhaps the two approaches to confronting the Czech authorities can be complementary — and in any case character will probably predetermine an individual's approach. There is no doubting Tomin's strength of character, nor even his ability as an important philosopher.

The visits of Western academics to Prague raises a number of important issues: though some might like to argue otherwise, few can pretend their visit was purely to exchange intellectual ideas.

"I went out of fascination. But it turned into involvement and commitment," said one Oxford fellow.

But why is the study of philosophy so dangerous for the authorities? Because it is not just thinking about thinking: it presupposes freedom to inquire, it fuels freedom to think what you like where you like with whom you like. It is an activity itself.

Tomin has written several *samizdat* (underground) articles on Plato and is preparing a book on Aristotle. In the past few months he has been awarded a visiting fellowship to Cambridge, he has been asked to give the Vaughan Memorial lectures at Balliol (they were last given by Jurgen Habermass) and asked to talk at Bedford College, London and at University College, London.

Tomin has refused all the invitations for fear of losing his right to return to Prague. But one thing he has always stressed to all his Western visitors: "Don't forget the Patochka University."

The Patochka University is still a long way off from the fairly institutionalized framework of its famous counterpart in Poland, the Flying University. Recently that too has been under serious attack but the relative freedom enjoyed by the latter reflects the weaker position of the Gierek regime in Poland. It is illustrated in the story of the two dogs crossing the Polish/Czech border: the Polish dog, with all its ribs showing, says it is entering Czechoslovakia because it wants to eat regularly. The Czech dog says it is entering Poland because, although quite well fed, it likes to bark now and then.

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'Some day I want to go to Manitoba and see the Great Manitoba Wall.'

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Dalhousie Law School

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The faculty of law of Dalhousie University is interested in obtaining an assistant, associate, or full professor, with special expertise in the environmental law area, though an ability to teach other public and common law subjects is also essential. Graduate work, practice, or equivalent experience beyond the LL.B is important. Salary and position commensurate with qualifications and experience, and subject to final approval by the university.

Qualified persons interested in applying, please write to:

The Deen
Faculty of Law
Dalhousie University
Halifax, Nova Scotia
B3H 4H9

The University of Alberta

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Candidates should have achieved distinction as a researcher, teacher and scholar and should have appropriate administrative experience.

The appointment is expected to commence July 1, 1980 for an initial term of five-years.

Written applications or nominations should be accompanied by a curriculum vitae and the names of at least three referees and should be submitted within three weeks.

Please address replies to:

Dr. Myer Horowitz, President and
Chairman of the Search Committee
3-1, University Hall
The University of Alberta
Edmonton, Alberta
T6G 2J9.

CAUT BULLETIN

Special advertising edition — June '80

Due to requests from several of our member universities, the CAUT will be publishing, on a trial basis, a special edition of the *CAUT Bulletin* devoted primarily to advertising. This summer edition of the *Bulletin* will be in addition to the six regular issues which appear at the first of September, October, December, February, April and May.

The summer edition is scheduled for publication in mid-June.

The deadline for receipt of advertisements for this issue is May 20.

We hope that many of our member universities will find that this special advertising edition of the *Bulletin* provides a useful service and that we will be able to provide it on a continuing basis in future.

UNIVERSITY OF BRITISH COLUMBIA

Faculty of Medicine.
Health Sciences Centre Hospital,
Pathologists-Laboratory Physicians.

The Health Sciences Centre Hospital at the University of British Columbia invites applications for professional staff positions in the laboratory. This is a new teaching hospital with extensive research facilities which will open in April 1980. A number of positions are available with responsibilities in Anatomical Pathology, Hematology, Medical Biochemistry and Microbiology. A position in General (AP-CP) Pathology may also be available. Some of these positions may be shared with other teaching hospitals and it is expected that successful applicants will qualify for faculty appointments in the Department of Pathology, U.B.C. Preference will be given to Canadian citizens or residents. Inquiries with curriculum vitae and references should be sent to: Dr. William M. Thurlbeck, Department of Pathology, University of British Columbia, 2075 Wesbrook Mall, Vancouver, British Columbia, V6T 1W5.

ADMINISTRATIVE POSITIONS

UNIVERSITY OF MANITOBA. Department of Pathology. Applications are invited for the position of Professor and Head at the Faculty of Medicine, University of Manitoba and the Health Sciences Centre. Candidates should have a substantial record and academic achievement in Pathology, extensive experience in teaching and research and familiarity with the management of diagnostic laboratory services. The Department is responsible for programs of education in Pathology at the undergraduate and graduate levels in medicine and in related health disciplines; programs of basic and applied research; and programs of service at the Health Sciences Centre. Canadian citizens, permanent residents, and others eligible for employment in Canada at the time of application are especially encouraged to apply. Applications and nominations should be accompanied by a curriculum vitae and submitted to: Dr. Arnold Naimark, Dean and Chairman, Pathology Search Committee, 753 McDermot Avenue, Winnipeg, Manitoba, Canada, R3E 0W3.

WILFRID LAURIER UNIVERSITY. Department of Psychology. We are seeking an established scholar who is appreciative of the value of both basic and applied research to chair a department of fifteen faculty in a small university. There are three major components of the department: a strong undergraduate programme, a Master's programme in General Experimental Psychology in the areas of learning, cognition and social, and a Master's programme in Social-Community Psychology. Of particular interest is an individual who has a strong commitment to the development of an evolving Social-Community programme to the extent that such a person might assume the role of Programme Director as well as Chair. Direct inquiries to: Chairman, Department of Psychology, Wilfrid Laurier University, Waterloo, Ontario, N2L 3C5.

UNIVERSITY OF ALBERTA. Faculty of Medicine. Coronery Cere Unit Director. The Faculty of Medicine and the University of Alberta Hospital (with Alberta Heritage Applied Cardiac Research funding) are seeking an experienced cardiologist to direct a nine bed C.C.U.; teaching and research, as well as the ability to supervise the in-hospital resuscitation team and program are requirements. Please reply with curriculum vitae and names of three referees to: Dr. R.F. Taylor, Acting Director, Division of Cardiology, Department of Medicine, 6-124B Clinical Sciences Building, University of Alberta, Edmonton, Alberta, T6G 2G3.

UNIVERSITY OF ALBERTA. Faculty of Medicine. Cardiac Catheterization Leboretories — Director. The Faculty of Medicine and the University of Alberta Hospital (with Alberta Heritage Applied Cardiac Research funding) are seeking an established clinical and research cardiologist for this position. Please reply with curriculum vitae and names of three referees to: Dr. R.F. Taylor, Acting Director, Division of Cardiology, Department of Medicine, 6-124B Clinical Sciences Building, University of Alberta, Edmonton, Alberta, T6G 2G3.

UNIVERSITY OF ALBERTA. Faculty of Medicine. Cardiac Rehabilitation Institute — Director. The University of Alberta, Faculty of Medicine, (with Alberta Heritage Applied Cardiac Research funding) seeks a cardiologist with experience in Cardiac Rehabilitation, teaching and research, to head a cardiac rehabilitation referral centre. Please reply with curriculum vitae and names of three referees to: Dr. R.F. Taylor, Acting Director, Division of Cardiology, Department of Medicine, 6-124B Clinical Sciences Building, University of Alberta, Edmonton, Alberta, T6G 2G3.

DALHOUSIE UNIVERSITY. Chairman, Department of Geology. The Department of Geology, Dalhousie University seeks a Chairman from July, 1981. The post could carry the rank of Full Professor. The new chairman should be able to provide leadership to the department and develop the present teaching and research activities, which emphasise marine earth science, Appalachian geology, and undergraduate teaching, including a proposed new B.S.c programme in marine geological resources. The Department has a faculty of 12, excellent technical support, is well equipped for marine work, geophysics and geochemistry, and graduates around 20 B.Sc. and 10 M.Scs. and Ph.Ds. each year. Confidential enquiries from suitable persons in all the sub-disciplines of the earth sciences should be directed to D.J.W. Piper, Chairman, Department of Geology, Dalhousie University, Halifax, Nova Scotia, B3H 3J5 (902) 424-2363. Formal applications, giving the names of referees should be made to the Dean of Arts and Sciences,

UNIVERSITY OF REGINA

Faculty of Engineering

TWO VACANCIES

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Assistant or Associate Professor opening for a Professional Engineer to develop end teach manufacturing processes end machinery, facility location and layout, industrial machine design, and other industrial systems and general engineering classes. Send resume and name of three references to Dean W.B.H. Cooke, Faculty of Engineering, University of Regina, Regina, Saskatchewan S4S 0A2.

Associate or Full Professor. Specialization in transportation systems planning and engineering. M.Sc. or Ph.D. required. Teaching small classes of undergraduate and graduate students, research and consulting encouraged. Send resume and name of three references to Dean W.B.H. Cooke, Faculty of Engineering, University of Regina, Regina, Saskatchewan S4S 0A2.

Dalhousie University, Halifax, N.S.

ACADIA UNIVERSITY. School of Engineering. Administrative Post. Applications are invited for the position of Dean of Engineering at Acadia University. The School of Engineering participates in the Associated Universities Scheme of the Nova Scotia Technical College and offers the early years of the Engineering degree. The field of specialization of the appointee is open. The appointment will date preferably from 1 July 1980 but may commence later by mutual agreement. Applications, which should include an up-to-date curriculum vitae, and the names of three referees, should be addressed to Dr. J.R.C. Perkin, Vice-President, Academic, Acadia University, Wolfville, Nova Scotia, B0P 1X0, and will be received until the position is filled.

UNIVERSITY OF CALGARY. Early Childhood Educetion Programme. Faculty of Education. Program Director. The Faculty of Education, University of Calgary requires e Program Director for Early Childhood Education. The position involves the implementation of a new Early Childhood Education Program leading to the B.Ed. degree. Duties to include co-ordination and integration of departmental and faculty contributions to the program, liaison with field agencies involved in Early Childhood Services, plus some teaching responsibilities. Criteria for selection will include: (1) appropriate post-graduate work in early childhood education or related area; (2) field experience in an early childhood education setting; (3) an approach compatible with Alberta Early Childhood Services philosophy; (4) proven ability to work cooperatively in a collegial setting. Academic renk dependent on qualifications and experience. Director will report to the Dean, Faculty of Education. Appointment to begin July 1, 1980, subject to confirmation of funding. Applications, together with curriculum vitae and names of three referees, should be submitted prior to May 31, 1980, and should be addressed to: Robert Stamp, Fecuity of Education, The University of Calgary, Calgary, Alberta, T2N 1N4.

McGILL UNIVERSITY. Jewish Teecher Training Program, Jewish Studies Progrem and Faculty of Educetion. Applications are invited for the position of Director, Jewish Teacher Training Program. Advanced degrees in both Jewish Studies and Education are required, with Ph.D. in at least one area. The appointee will be expected to teach, supervise practice teeching, direct and co-ordinate the Program, recruit, do liaison work with local Jewish schools, and the Jewish Education Resource Centre, and supporting organizations. Rank, salary, and terms of contract to be determined. Apply to Professor B. Barry Levy, Jewish Studies Program, McGill University, 3511 Peel Street, Montreal, Quebec. H3A 1W7.

CONCORDIA UNIVERSITY. Economist. Senior Faculty Position. Required economist for a senior level position in the Department of Economics. Suitable candidate will also serve as the Director of Applied Economic Research. Cendidates with strong publication record and experience in various areas of applied economic research are invited to contact Prof. B.S. Sahni, Chairman, Department of Economics, Concordia University, Montreal (514) 879-5823.

MEMORIAL UNIVERSITY OF NEWFOUNDLAND. Department of Geology, Heed. Applications are invited for the position of Head of Department of Geology, Memorial University of Newfoundland. Candidates should have a strong background in research and administration and have interests in teaching. The appointment will be a senior academic rank. No specific field of research is required but candidates must have the ability to understand and encourage a wide range of geological research, much of it involving close cooperation with other university departments, government and industry. The Department has 19 faculty members and a full technical and secretarial staff. The physicel plant contains a full range of teaching and research laboratories and equipment (Automated Microprobe, S.E.M., X.R.F., X.R.D., A.A., Solid Source Mass Spectrometer, etc.). Departmental research is currently directed toward aspects of Appalachian geology and the Precambrian of Labrador. Future expansion is anticipated in offshore geology of the adjacent Atlantic margin. Written applications, including a curriculum vitae and the names of a minimum of three referees, should be sent to the Dean of Science, Chairman of the Geology Headship Search Committee, Chemistry-Physics Building, Memorial University of Newfoundland, St. John's, Newfoundland, Canada, A1B 3X7, by August 30, 1980.

ACCOUNTING

SAINT MARY'S UNIVERSITY. Department of Accounting. Openings exist at Saint Mary's University for accounting professors committed to academic excellence and interested in maintaining Saint Mary's traditionally high standards of developing accounting professionals. A combination of professional and academic credentials is sought for permanent and short-term appointments commencing September 1, 1980. Please send resumé to: H. Bryan Emerson, Chairman, Department of Accounting, Saint Mary's University, Halifax, Nova Scotia, B3H 3C3.

WILFRID LAURIER UNIVERSITY. School of Business and Economics. Accounting. 1. Lecturer up to Associate Professor in Accounting courses. 2. M.B.A. minimum requirement for Lecturer; Ph.D. for Assistant or Associate Professor. 3. Teach a minimum of nine hours per week. 4. Negotiable. 5. Dr. T.F. Cawsey, Ph.D., Associate Dean of Business, School of Business and Economics, Wilfrid Laurier University, Waterloo, Ontario, N2L 3C5, Canada. 6. Starting July 1, 1980. 7. When positions filled. Positions subject to budget approval.

UNIVERSITY OF WATERLOO. Department of Economics, Accounting. Applications are invited for several faculty positions from those with teaching and research interests in accounting, auditing, taxation and finance. Doctorate in hand or near completion is preferred but candidates who plan to pursue doctoral studies in the future will be considered. Teaching and research excellence are required. Ranks open and salaries competitive depending upon education and experience. Appointments will be from September 1, 1980 but other dates can be arranged due to the flexibility provided by our year round co-op programmes. Application or inquiries, including curriculum vitae, should be sent to Professor Robert Long, Director of Accounting Programmes, Department of Economics, University of Waterloo, Waterloo, Ontario, N2L 3G1. (First consideration will be given to those applicants who at the time of application are legally eligible to work in Canada for the period covered by these positions. Availability of these positions is subject to budgetary approval.)

CONCORDIA UNIVERSITY. Department of Accountancy. Faculty positions: full-time faculty positions, to teach accountancy courses; minimum requirement: Graduate and Professional Degree; classes commence September 1980. Apply to: Professor L. Bessner, 1455 de Maisonneuve Blvd. West, Rm GM-503-53, Montreal, P.Q. H3G 1M8.

ANTHROPOLOGY

UNIVERSITY OF TORONTO SCARBOROUGH COLLEGE. Division of Social Sciences. Anthropology. Applications are invited for a one-year contractually-limited position in Anthropology at the Lecturer or Assistant Professor level with the possibility of renewal. Ph.D. preferred, but predoctoral candidates will be considered. The field is in Physical Anthropology with expertise in osteology, odontology and human evolution in addition to any other area. The position involves undergraduate teaching and preference will be given to those with previous experience in teaching and course design at the University level. Send enquiries and curriculum vitae to Professor L. Sawchuk, Assistant Chairman, Anthropology, Division of Social Sciences, Scarborough College, University of Toronto, West Hill, Ontario, M1C 1A4 no later than May 31, 1980.

UNIVERSITY OF SASKATCHEWAN. Department of Anthropology and Archaeology. Applications are invited for a position as lecturer in physical anthropology, one year non-renewable, sabbatical replacement. Salary: $15,394 on 1979-80 scale for 12 months. The applicant should be a Ph.D. candidate or higher, Canadian experience preferred. Duties will include the teaching of two sections of an introductory half-class, Archaeology 150 A or B: Man in the Past; two second year half-classes in Introductory Physical Anthropology; and one third or fourth year half-class in an area of the appointee's expertise. Desired areas of emphasis include osteology, primatology and human paleontology, but other specialties will be considered. Send curriculum vitae and the names of three referees to: M.C. Marino, Head, Department of Anthropology, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0. Date of Appointment: 1 July 1980. It is hoped that a candidate will be chosen by the end of May.

ART

UNIVERSITY OF MANITOBA. School of Art. Photographer required to teach beginning and advanced courses. The ability to teach the History of Photography would be an asset. M.F.A. or equivalent. Submit curriculum vitae, examples of recent work (slides or prints) and the names of three references to: R.C. Sakowski, Acting Director, School of Art, University of Manitoba, Winnipeg, Manitoba, R3T 2N2. Deadline: June 1, 1980.

UNIVERSITY OF MANITOBA. School of Art. Printmaker required to teach relief and/or serigraphy. Part-time position probably to be one-third to two-thirds of an academic load. M.F.A. or equivalent. Submit curriculum vitae, examples of recent work (slides or prints) and the names of three references to: R.C. Sakowski, Acting Director, School of Art, University of Manitoba, Winnipeg, Manitoba, R3T 2N2. Deadline: June 1, 1980.

BIOCHEMISTRY

MEMORIAL UNIVERSITY OF NEWFOUNDLAND. Department of Biochemistry. Food Process Scientist. Individual with formal training in food processing required to teach courses in food process engineering and develop an independent research program in the area of biochemical engineering as related to food processing and/or food plant resource and waste management. Ph.D. or equivalent documented excellence in food engineering and food process science required. Salary and position dependent on qualifications of applicant. Position is available effective July 1, 1980, subject to approval by the Board of Regents. Send resumé, official transcripts and names of three references before June 1, 1980, to Dr. S. Mookerjea, Department of Biochemistry, Memorial University of Newfoundland, St. John's, Newfoundland, Canada, A1B 3X9.

MEMORIAL UNIVERSITY OF NEWFOUNDLAND. Biochemistry Department. Post Doctoral Research Fellow with good background in Biochemistry or Chemistry, to join a project on structural aspects of collagen biosynthesis, beginning July 1, 1980. Experience in synthesis and structure of peptides and/or isolation and structure of enzymes desirable. Salary around $14,000 for 1 year with possibility for renewal. Send biodata and names of referees to Dr. V.S. Ananthanarayanan, Biochemistry Department, Memorial University of Newfoundland, St. John's, Newfoundland, A1B 3X9, Canada, before June 1, 1980.

MEMORIAL UNIVERSITY OF NEWFOUNDLAND. Department of Biochemistry. Dietetics and Nutrition Position. The Biochemistry Department of Memorial University has a faculty position (Lecturer or Assistant Professor, depending upon qualifications) open, subject to approval by the Board of Regents, in its Food and Nutrition programme effective July 1, 1980. The duties will include teaching a full year course in Introductory Foods and the development and subsequent direction of a Dietetic Internship programme. Qualifications: degree in Nutrition/Dietetics and eligibility for, or membership of, the Newfoundland and Canadian Dietetic Associations. Preference will be given to applicants with an advanced degree in nutrition, food, institutional management or education. The successful applicant will have at least five years' experience in responsible therapeutic nutrition and administrative positions as a staff member of an organization with an approved internship in therapeutic nutrition and food service administration or three years in therapeutic nutrition and/or administrative positions and two years teaching experience in nutrition, foods and institutional management at the university level. Applications are to be submitted by June 1, 1980, with curriculum vitae and three names of referees, to Dr. S. Mookerjea, Head, Department of Biochemistry, Memorial University of Newfoundland, St. John's, Newfoundland, Canada, A1B 3X9.

UNIVERSITY OF BRITISH COLUMBIA. Department of Biochemistry. The University of British Columbia invites applications for a position beginning after January 1, 1981. The successful applicant will have an M.D. or Ph.D. degree in biochemistry and at least one year of postdoctoral research experience. The applicant will have a strong commitment to teaching and research. Applications with complete curriculum vitee including a list of publications, a brief statement of research interests and the names of three individuals whom we may contact for references should be sent before September to the Search Committee, Department of Biochemistry, University of British Columbia, Vancouver, British Columbia, V6T 1W5, Canada.

MEMORIAL UNIVERSITY OF NEWFOUNDLAND. Merine Sciencas Research

Laboratory. A Post-Doctoral Fellowship or Research Associate position is available for one to two years. Established research program on fish pituitary hormones with emphasis on reproduction. Training and experience in biochemistry or physiology appropriate. To qualify as a Research Associate, a minimum of 2 years of related post-doctoral experience or equivalent is required. The salary will be established using NSERC guidelines where applicable. Send curriculum vitae and three references to: Dr. D.R. Idler, Director, Marine Sciences Research Laboratory, Memorial University of Newfoundland, St. John's, Newfoundland, A1C 5S7, Canada.

BIOLOGY

MEMORIAL UNIVERSITY OF NEWFOUNDLAND. Department of Biology. Fungal Parasites of Nematode Cysts. Postdoctoral position available 1 June 1980. The position is initially for 1 year to carry out a quantitative analysis of fungi associated with golden nematode cysts and renewable for a second year. The second year will involve large scale growth and evaluation of selected fungi as biocontrol agents of the golden nematode under controlled quarantine greenhouse conditions. Initial salary: $12,900 ($14,100 after 1 September 1980). Send curriculum vitae and names of three references to: Dr. R.A. Nolan, Department of Biology, Memorial University of Newfoundland, St. John's, Newfoundland, Canada, A1B 3X9.

BOTANY

UNIVERSITY OF TORONTO. Department of Botany. Applications are invited for a faculty position in the Department of Botany as a Flowering Plant Systematist and Vascular Plant Harbarium Curator. The appointment will be granted on a 3-year contractually limitad basis. The successful candidate will normally have a Ph.D. and a significant research record, together with experience in the teaching of taxonomy, and as a curator of an herbarium. The appointment will be at the Assistant Protessor level, at a starting salary of not less than $17,xxx, dependent upon experience. Further particulars can be obtained from Professor T.C. Hutchinson, Chairman, Department of Botany, University of Toronto, Toronto, Ontario, M5S 1A1, Canada, to whom all applications and the names and addresses of three referees should be sent as soon as possible.

BUSINESS ADMINISTRATION

UNIVERSITY OF WATERLOO. Department of Economics. Business Administration. Applications are invited tor several faculty positions from those with teaching and research interests in accounting, auditing, taxation and tinance. Doctorate in hand or near completion is preferred but candidates who plan to pursue doctoral studies in the future will be considered. Teaching and research excellence are requirad. Ranks open and salaries competitive depending upon education and experience. Appointments will be from September 1, 1980 but other dates can be arranged due to the flexibility provided by our year round co-op programmes. Applications or inquiries, including curriculum vitae, should be sent to Professor Robert Long, Director of Accounting Programmes, Department of Economics, University of Waterloo, Waterloo, Ontario, N2L 3G1. (First consideration will be given to those applicants who at tha time of application are legally eligible to work in Canada for the period covered by these positions. Availability of these positions is subject to budgetary approval.)

UNIVERSITY OF GUELPH. School of Agricultural Economics and Extension Education. The University ot Guelph has a vacancy tor a visiting assistant professor in the areas of tinancial and management accounting, corporate tinance and tinancial institutions. This is a joint appointment between the School of Agricultural Economics and Extension Education and the Department of Economics. Part of the teaching assignment will be associated with a new Management Education Program. Applicants will ideally have doctorate in Accounting or Finance, but other qualifications such as C.A and M.B.A. will also be considered. Research and teaching experience desirable. Salary is competitive and position is subject to budgetary approval. Letters ot application should be directed as soon as possible to either Protessor E.L. Menzie, Director, School of Agricultural Economics and Extension Education, University of Guelph, or Protessor J. Vanderkamp, Chairman, Department ot Economics, University of Guelph, Guelph, Ontario. N1G 2W1.

BUSINESS ADMINISTRATION AND COMMERCE

WILFRID LAURIER UNIVERSITY. School of Business and Economics. Accounting, Finance, Business Policy. Applications are invited for teaching positions in the areas ot: Accounting, Finance and Business Policy for the 1980-81 teaching year. Qualifications: Ph.D. or Ph.D. candidates. Duties: include graduate and/or undergraduate teaching. Applications will be accepted until positions are tilled, and are subject to budget approval. Send applications to: Dr. T.F. Cawsey, Ph.D., Associate Dean of Business, School ot Business and Economics, Wilfrid Laurier University, Waterloo, Ontario, N2L 3C5, Canada.

MCMASTER UNIVERSITY. Faculty of Business. Applications are invited in the following areas: (i) Accounting, (ii) Business Policy, (iii) Finance, (iv) Management Information Systems, (v) Marketing and International Business, (vi) Marketing Research, (vii) Production and/or Management Science. Rank depends on qualifications and experience; preferably at the Assistant or Associate Protessor level. Visiting appointment is also possible. Ph.D. or DBA degree expected, preferably with teaching and research experience. Duties include research and teaching at both graduate and undergraduate levels. Applicants for Management Information Systems, Production and/or Management Science will be expected to contribute to the Ph.D. program in these areas. Applicants in both fields of Marketing will have to teach courses in Introductory Marketing. International Business will include courses in International Marketing and Comparative Marketing; Marketing Research will include advanced research methodology covering qualitative and quantitative aspects. Salary will commensurate with qualifications, teaching and practical experience. Appointment date is open; July 1st, 1980 is preferred. Application date closes when position is filled. Applications should be sent to: Dr. A.Z. Szendrovits, Dean, Faculty of Business, McMaster University, Hamilton, Ontario, L8S 4M4.

CARLETON UNIVERSITY. School of Commerce. One position in tenure track, lecturer, assistant or associate protessor in (i) accounting, (ii) systems analysis/data processing, or (iii) management science. 2. Ph.D. For the accounting position, M.B.A. plus a professional accounting designation. 5. Application should be sent to Dr. W.L. Weber, Chairman, Recruiting Committee, School of Commerce, Carleton University, Ottawa, Ontario, K1S 5B6. Starting July 1, 1980. 7. When position filled.

UNIVERSITY OF WATERLOO. Department of Economics. Business Administration and Commerce. Applications are invited tor several faculty positions from those with teaching and research interests in accounting, auditing, taxation end finance. Doctorate in hand or near completion is preferred but candidates who plan to pursue doctoral studies in the future will be considered. Teaching excellence is required; research potential is desirable. Ranks open and salaries competitive depending upon education and experience. Appointments will be from September 1, 1980 but othar dates can be arranged due to the flexibility provided by our year round co-op programmes. Application or inquiries, including curriculum vitae, should be sent to Protessor Robert Long, Director of Accounting Programmes, Department ol Economics, University of Waterloo, Waterloo, Ontario, N2L 3G1. (First consideration will be given to those applicants who at the time of application are legally eligible to work in Canada for the period covered by these positions. Availability of these positions is subject to budgetary approval.)

ALGOMA UNIVERSITY COLLEGE. Department of Commerce. Applicants are invited for two faculty positions from those with teaching and research interests in accounting and the area of general management, personnel, and organizational behaviour. The qualifications requested include a minimum of M.B.A. and/or protessional certification plus practical experience and/or a successtul teaching period. The appointment would be effective July 1, 1980. Rank open, salaries commensurate with qualifications and experience (floor 1979-80 tor Assistant Professor: $19,320.00). Applications will be accepted until the positions are tilled. This position is subject to budgetary approval. Applications, official transcripts and curriculum vitae should be accompanied by the names ot three referees and should be forwarded to Protessor George Gekas, Department ot Commerce, Algoma University College, Sault Ste. Marie, Ontario, P6A 2G4.

UNIVERSITY OF ALBERTA. Faculty ol Business Administration and Commerce. Applications are invited for faculty positions from those with teaching and research interests in: accounting, finance (especially financial theory, corporate finance, or insurance), management science, marketing, business policy, personnel, industrial relations and legal relations. Ph.D. or equivalent is desirable. Salary and rank depend on qualifications. Applications welcome until positions are filled. Appointments normally effective July 1. Send resumé to: Dr. Roger S. Smith, Dean, Faculty of Business Administration and Commerce, University of Alberta, Edmonton, Alberta, T6G 2G1. The University of Alberta is an equal opportunity employer.

BUSINESS POLICY

WILFRID LAURIER UNIVERSITY. School ot Business and Economics. Business Policy. 1. Lecturer up to Associate Professor in Business Policy courses. 2. M.B.A. minimum requirement tor Lecturer; Ph.D. for Assistant and Associate Professor. 3. Teach a minimum of nine hours per week. 4. Negotiable. 5. Dr. T.F. Cawsey, Ph.D., Associate Dean ot Business, School ot Business and Economics, Wilfrid Laurier University, Waterloo, Ontario, Canada, N2L 3C5. 6. Starting July 1, 1980. 7. When positions filled. Positions subject to budget approval.

CHEMISTRY

UNIVERSITY OF TORONTO. Department ol Chemistry. Applications are invited from suitably qualified candidates tor a Visiting Protessor position (1 year) in Inorganic Chemistry. The appointment will probably be made at the Assistant Professor level, but may also be ot interest to University Faculty on leave. The position is on the central campus at the University of Toronto. The appointment will run from July 1st, 1980 to June 30th, 1981, and will involve teaching ot inorganic courses at both the undergraduate and graduate levels. Excellent research facilities are available tor both independent and collaborative work. Interested persons should submit a tull curriculum vitae with the names of at least three referees, a statement of teaching experience and an outline of research interests and requirements, as soon as possible, to: The Chairman, Department ot Chemistry, University of Toronto, 80 St. George Street, Toronto, Ontario, M5S 1A1, Canada.

UNIVERSITY OF TORONTO. Department ol Chemistry. Applications are invited from suitably qualified candidates for a regular statt position (tenure stream) in Inorganic Chemistry. The appointment will be made at the Assistant Professor level and will be at the central campus of the University ot Toronto. The position will be available from July 1st, 1980 and will be tilled as soon as possible. Candidates who may be available from July 1st, 1981 are also invited to apply. Interested persons should submit a full curriculum vitae with the names ot at least three referees, a statement of teaching experience and an outline ot current and future research interests to: The Chairman, Department of Chemistry, University of Toronto, 80 St. George Street, Toronto, Ontario, M5S 1A1, Canada.

UNIVERSITY OF WATERLOO. Department ol Chemistry. Applications are being accepted for the position of Assistant Protessor or Junior Associate Professor in organic chemistry. The areas of bio-organic, organic electrochemistry, polymer organic or organo-metallic chemistry are of particular interest. In addition to being an excellent teacher the successful candidate will be expected to initiate a vigorous and innovative research program. Excellent opportunities for research exist within the Guelph-Waterloo Centre tor Graduate Work in Chemistry. Present Assistant Protessor minimum $18,400. Applicants should submit a complete curriculum vitae, an outline ot research plans and names of three reterees to: Dr. D.E. Irish, Chairman, Department of Chemistry, University ot Waterloo, Waterloo, Ontario, N2L 3G1, Canada. Effective date ol appointment is July 1, 1980 or January 1, 1981. Closing date for receipt of applications is May 30, 1980. (Subject to the availability ot tunds.) First consideration will be given to those applicants who at the time of application are legally eligible to work in Canada for the period covered by this position.

COMPUTER SCIENCE

ROYAL MILITARY COLLEGE OF CANADA. Department ol Computer Science. 1. The Royal Military College ot Canada has two positions available at the Assistant Professor level. Candidates must hold a Ph.D. in Computer Science or a closely related tield with specialization in one or more ot the following areas: programming languages and compilers, operating systems, data base management systems, digital communications and computer networks, logic design and interlacing, real time digital computer control systems, systems engineering, software engineering. 3. Duties will include computing centre support, teaching at the undergraduate and graduate (master's) levels, and research. Eligibility for membership in the APEO and the ability to work in both official languages are definite assets. 4. Salary scales (1979-80): $19,400-$28,500, depending on experience and qualifications. 5. Applications, including curriculum vitae and names ot three referees, should be forwarded to: Dr. R. Benesch, ADP Director, Royal Military College of Canada, Kingston, Ontario, K7L 2W3. 6. Appointment date open. 7. When positions are filled.

CARLETON UNIVERSITY. School ol Computer Science. The recently established School of Computer Science invites applications for tenure-track, as well as Visiting Protessor, appointments in Computer Science commencing September 1, 1980 and July 1, 1981. Interest and teaching ability are required in a broad range of undergraduate courses. Applicants should have research interest in one or more of the following areas: computer architecture, data bases, artiticial inteligence, systems analysis, operating systems, programming languages or graphics. A Ph.D. in Computer Science is preferred, but consideration will be given to those with a Master's Degree and appropriate experience. Applicants must be legally eligible to work in Canada and should address applications to: Professor John E. Neilson, Director, School of Computer Science, Carleton University, Ottawa, Canada. K1S 5B6.

COUNSELLING SERVICE

UNIVERSITY OF MANITOBA. Counselling Service. 1. Staff position as learning skills specialist in the Counselling Service at the University of Manitoba. 2. Required qualifications include an advanced degree in Learning and Study Skills or related discipline plus work experience in the area, preferably with adults. Candidates would be expected to teach basic study skills courses and develop and coordinate other learning skills programs, e.g. English Writing Proticiency, Reading Effectiveness, English as a Second Language. Special interest and training in edult learning would be an asset. 3. Salary is dependent on experience and qualifications. Salary range (1979-80) tor Assistant Professor, $17,798 to $23,263. 4. Appointment date: September 2, 1980. 5. Closing date for completed application June 1, 1980. 6. A letter of application, a curriculum vitae, transcripts, and names, addresses and phone numbers of three referees should be forwarded to: Dr. Lyle Eide, Chairman, Search Committee, Counselling Service, 474 University Centre, University of Manitoba, Winnipeg, Manitoba, R3T 2N2. 7. Canadian citizens, permanent residents, and others eligible for employment in Canada at the time of application are especially encouraged to apply. Both men and women are encouraged to apply.

DANCE

YORK UNIVERSITY. Faculty of Fine Arts. Department of Dance. Sessional full-time visiting assistant professor, September 1, 1980 to April 30, 1981, to teach Advanced Contemporary Technique and Repertory. Duties include committee work and student advising. Preference to be given to candidate with professional and post-secondary experience. Position subject to budget approval. Apply to: Professor Y. L-Ph. Cousineau, Chairman, Department of Dance, Faculty of Fine Arts, York University, 4700 Keele Street, Downsview, Ontario, M3J 1P3.

DENTISTRY

UNIVERSITY OF ALBERTA. Faculty of Dentistry. Division of Removeable Prosthodontics. The Faculty of Dentistry at the University of Alberta invites applications for a full-time term-appointment position in the Division of Removeable Prosthodontics, available July 1, 1980. Responsibilities include administration, teaching, and research of all aspects of the discipline. Preference will be given to candidates with a D.D.S., or equivalent, and graduate or postgraduate education in Removeable Prosthodontics, Maxillofacial Prosthetics, and treatment of geriatric patients. Rank and salary are commensurate with education and experience. Intramural private practice facilities are available. Applicants should be eligible for licensure in the Province. The University of Alberta is an equal-opportunity employer. All inquiries and curricula vitae should be forwarded within one month of publication to Dean G.W. Thompson, Faculty of Dentistry, University of Alberta, Edmonton, Alberta, Canada, T6G 2N8.

MCGILL UNIVERSITY. Faculty of Dentistry. Applications are invited for full-time positions, subject to availability of funds, in Operative Dentistry, Oral Diagnosis and Removeable Prosthodontics. Duties to commence September 1, 1980. Applicants must be graduates of an accredited dental program preferably with graduate training and prepared to meet the requirements for licensure in the Province of Quebec. Academic rank and salary will be commensurate with qualifications and experience. Enquiries, accompanied by curriculum vitae, to be sent to: Dean's Office, Faculty of Dentistry, McGill University, 3640 University Street, Montreal, P.Q., H3A 2B2.

DRAMA

THE UNIVERSITY OF ALBERTA. Drama: Cutter and Costume Designer. The University of Alberta, Department of Drama, seeks a full-time Sessional lecturer in Cutting and Costume Design. Applicant would be required to teach costume building and cutting with supporting skills. Some teaching of costume design would be appropriate. Wide experience in cutting, dyeing and texturing is essential. The position is one deeply involved with the BFA and MFA professional program. Wardrobe facilities are excellent and include two large costume shops to supply a vigorous Acting and Design program. This is a one year appointment from September 1, 1980 to April 30, 1981. The University of Alberta is an Equal Opportunity Employer. Send applications, Curriculum Vitae, Vital Statistics and at least three letters of reference to: Dr. James H. McTeague, Chairman, Department of Drama, University of Alberta, Canada, T6G 2C9.

ECONOMICS

UNIVERSITY OF SASKATCHEWAN. Department of Economics and Political Science. An opening is available for a one year appointment (sabbatical leave replacement) at the lecturer or assistant professor level in economics to teach principles and theory at the undergraduate level. Ph.D. preferred, some teaching experience desirable. Normal starting date is July 1, 1980. Salary upwards from $19,519 (1979-80 scale) per annum for the assistant professor rank. Application, including curriculum vitae and names of three referees, should be sent to Professor K. Lal, Acting Head, Department of Economics and Political Science, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0.

UNIVERSITY OF LETHBRIDGE. Department of Economics. 1. One position at the Assistant Professor level subject to the availability of funding. 2. Ph.D. with competence in both scholarly activity and undergraduate teaching. 3. Introductory Economics, Development Economics, and Money and Banking. 4. Salary Schedule (1979-80): Assistant Professor $20,446-$28,616. 5. Applications including a curriculum vitae, transcripts and three letters of reference, should be sent to: Dr. B. Ebel, Chairman, Search Committee, Department of Economics, University of Lethbridge, 4401 University Drive, Lethbridge, Alberta, T1K 3M4. 6. One year terminal position beginning 1 July 1980. 7. Closing date: when filled.

CONCORDIA UNIVERSITY. Department of Economics. Faculty Positions. Possibility of two appointments at ranks commensurate with the candidate's qualifications. Applicants with main or secondary specialization in one or more of the following areas are invited to apply: General Theory, Industrial Relations-Labour Economics, and Economic History. Strong candidates in other areas will also be considered. Graduate and undergraduate teaching and supervision of Ph.D. dissertations. Salaries are fully competitive. Forward applications to: Dr. B. Sahni, Chairman, Department of Economics, Concordia University, 1455 De Maisonneuve Blvd., West, Montreal, Quebec.

EDUCATION

CONCORDIA UNIVERSITY. Department of Education. One year visiting appointment (leave replacement) in Graduate Programmes in Educational Technology. Qualifications are a Ph.D. with active research and teaching interests in two or more of: quantitative methods and research design; instructional psychology; human communications; measurement and evaluation; development and evaluation of educational materials (eg. T.V., computer-based learning, educational games), self instructional and distant study systems, systems analysis and planning. Responsibilities include teaching primarily at the graduate level, thesis supervision, Educational Technology internship supervision and opportunities to pursue research and development. Salary based on experience and qualifications. Applications with curriculum vitae and names of referees should be submitted to: Arpi Hamalian, Chairman, Department of Education, Concordia University, 1455 de Maisonneuve Boul. West, Montreal, Quebec, Canada, H3G 1M8.

SIMON FRASER UNIVERSITY. Faculty of Education. Music Education. Assistant Professor. Qualifications: Advanced academic preparation in music education. Experience in public school teaching involving extensive knowledge of current practice. Active interests in curriculum development and/or research on instruction applied to music. Teaching at graduate and undergraduate levels. Program development, research and publication. Appointment: Salary will be commensurate with qualifications and experience. The appointment, subject to final budget authorization, would be effective September 1, 1980. Application: Letters of application, together with curriculum vitae and the names of three referees should be sent to Dr. George Ivany, Dean of Education, Simon Fraser University, Burnaby, British Columbia, V5A 1S6. Closing date: Applications will be received until the position is filled.

UNIVERSITY OF NEW BRUNSWICK. Faculty of Education. Science Education. A faculty member is required at the level of Assistant or Associate Professor to teach primarily undergraduate but some graduate courses in Science Education. These courses are designed for students preparing to teach or teaching in both Elementary and Secondary schools. The appointment would be on tenure track beginning July 1, 1980. Completed doctorate in Science Education would be preferred with some school experience. Salary and benefits will be in accordance with regular UNB scales which are presently under negotiation. Submit c.v. and the names of three referees to: Dr. Marian Small, Chairman, Division of Curriculum and Instruction, Faculty of Education, P.O. Box 4400, Fredericton, New Brunswick. E3B 5A3. The appointment is subject to budget allocation.

MOUNT SAINT VINCENT UNIVERSITY. Education Department. Art Education. Mount Saint Vincent University invites applications for a full-time position in Art Education to commence July 1, 1980. Responsibilities will be to teach courses in art history with a specialization in women's art and art in the classroom. Preference will be given to candidates with a Ph.D. in art and some teaching experience. Rank and salary will be in accordance with qualifications and experience. Send curriculum vitae and the names of three referees to Dr. Susan Clark, Dean of Human and Professional Development, Mount Saint Vincent University, Halifax, Nova Scotia, B3M 2J6.

SIMON FRASER UNIVERSITY. Faculty of Education. Visiting Assistant Professor in Educational Administration. Visiting appointment, term flexible. Ph.D. in Educational Administration, university teaching experience, broad range of research interests. Graduate courses in Educational Administration, including Methods of Enquiry, and supervision of student theses. Salary dependent on qualifications. Send full curriculum vitae and the names of three referees to Dr. J.W. George Ivany, Dean of Education, Simon Fraser University, Burnaby, British Columbia, V5A 1S6. Effective September 1, 1980. Closing date: when position filled.

SIMON FRASER UNIVERSITY. Faculty of Education. Visiting Assistant Professor in Science Education. Assistant Professor in the field of Science Education, secondary and elementary. The preferred applicant will also have a background in Environmental Education, especially from an interdisciplinary perspective. The position will entail teaching in the undergraduate, graduate and teacher education (professional) programs in the fields of Curriculum Methodology. Salary dependent on qualifications. Send full curriculum vitae and the names of three referees to Dr. J.W. George Ivany, Dean of Education, Simon Fraser University, Burnaby, British Columbia, V5A 1S6. Effective September 1, 1980. Closing date: when position filled.

MOUNT SAINT VINCENT UNIVERSITY. Education Department. School Psychology. The Education Department of Mount Saint Vincent University invites applications for a full-time position in School Psychology, beginning July 1, 1980. Responsibilities will be to teach graduate courses in educational or school psychology and to supervise school-based practica. Additional responsibilities may include pre-service teacher preparation and/or undergraduate teaching as well as research, inservice courses and program development. Qualifications: Ph.D. in education or psychology; relevant publications or evidence of research potential, and two years professional experience preferred. Rank and salary will be in accordance with qualifications and experience. Send curriculum vitae and the names of three referees to Dr. Susan Clark, Dean of Human and Professional Development, Mount Saint Vincent University, Halifax, Nova Scotia, B3M 2J6.

UNIVERSITY OF ALBERTA. Faculty of Education. Sessional Vacancies, 1980-81. Applications from both men and women are invited for teaching positions at the Faculty of Education, University of Alberta for Spring Sessions (May 5-June 13), Summer Session (July 7-August 15) and the Fall and Winter terms (September 1980-April 1981). Sessional positions are available in the following departments: Educational Administration; Educational Foundations; Educational Psychology; Elementary Education; Industrial and Vocational Education; Secondary Education. Applications and inquiries together with curriculum vitae and names of referees should be made to: Dr. W.H. Worth, Dean, Faculty of Education, University of Alberta, Edmonton, Alberta, T6G 2G5.

EDUCATION-SPECIAL

UNIVERSITY OF ALBERTA. Department of Educational Psychology. Education of the Multiple/Dependent Handicapped. Positions Open: Associate Professor and Assistant Professor in Education of the Multiple-Dependent Handicapped. Applicants should have undergraduate and graduate training in this area, Ph.D. completed, University teaching and practical experience as well as demonstrated research. These are tenure route positions: Major responsibility will be to implement an undergraduate program to train teachers as well as other specialists working with the Multiple/Dependent Handicapped. This program will be complementary to an existing comprehensive undergraduate and graduate Special Education program. Employment will commence July 1, 1980. Salary: Associate Professor — $24,000-$28,000; Assistant Professor — $20,000-$24,000 per annum. These positions are open to both male and female applicants. Applications including a current curriculum vitae and names of referees should be sent to Dr. H.W. Zingle, Chairman, Department of Educational Psychology, The University of Alberta, Edmonton, Alberta, Caneda, T6G 2G5.

UNIVERSITY OF NEW BRUNSWICK. Faculty of Education. Spacial Education. A faculty member is required at the Assistant, Associate, or Full Professor level to teach primarily undergraduate courses in Special Education for students who are teaching or preparing to teach in Elementary schools. The initial appointment would be for one year beginning July 1, 1980. Salary negotiable. Ph.D. in Special Education preferred, with some school experience. Please apply to: Dr. Marian Small, Chairman, Division of Curriculum and Instruction, Faculty of Education, University of New Brunswick, P.O. Box 4400, Fredericton, New Brunswick, E3B 5A3.

UNIVERSITY OF CALGARY. Department of Educational Psychology. Applications are invited for positions of Assistant Professor. Qualifications include a Master's or Ph.D. degree plus experience in applied research. **Position 1 — Special Education** — The person appointed will have a sound general knowledge of the field of Special Education and practical experience in teaching or allied profession. **Position 2 — Clinical, School and Community Psychology** — The person appointed will heve a sound knowledge of assessment and therapeutic techniques. Effective date of appointment may be either July 1 or September 1, 1980. Applications should be sent to Dr. R.I. Brown, Head, Department of Educational Psychology, The University of Calgary, 2500 University Drive, N.W., Calgary, Alberta, Canada, T2N 1N4 and include detailed curriculum vitae and the names and addresses of three references.

UNIVERSITY OF MANITOBA. Faculty of Education. Department of Educational Psychology. We presently have open a one year appointment with the possibility of an extension at the assistant professor level in the Special Education Division of the Department of Educational Psychology, University of Manitoba, dependent on University budgetary considerations. A doctoral degree and classroom teaching experience are considered desirable. The major duties of this position include: teaching courses in the undergraduate teacher education programs (some off-campus teaching may be involved), special education programs (PreMed. and MEd.) in one or more of the following areas: 1) Emotional and Behavioral Disorders; 2) Learning Disabilities; 3) Areas related to the broad field of Special Education. The candidate would be participating in Department and Faculty committees and help in the supervision of students in the field. The position will remain open until a suitable applicant is found. Position to commence July 1, 1980. It is the policy of the University of Manitoba to give preference to those who are Canadian citizens or who are landed immigrants at the time of application unless other applicants have clearly superior qualifications. Both men and women are invited to apply. Please send credentials to: Dr. Lauran Sandals, Ph.D., Head, Department of Educational Psychology, Faculty of Education, University of Manitoba, Winnipeg, Manitoba, R3T 2N2.

ENGINEERING

UNIVERSITY OF WINDSOR. Department of Engineering Materials. Applications are invited for a tenure track appointment at the Assistant Professor rank (Associate Professor may be considered). Ph.D. required. Duties include teaching undergraduate and graduate courses and conducting research in one of the following areas: Physical-Chemical, Metallurgical Engineering/Science. Appointment effective July 1, 1980 or as soon as possible thereafter. Applications including curriculum vitae and the names of three referees, should be sent to Dr. W.V. Youdelis, Head, Department of Engineering Materials, University of Windsor, Windsor, Ontario, N9B 3P4.

UNIVERSITY OF WESTERN ONTARIO. Faculty of Engineering Science. Applications are invited for an appointment as an Assistant Professor in the aree of Control Systems. Qualifications required are an undergraduate degree in Engineering

(preferably Chemical) and a Ph.D. (or equivalent) in Control Systems. Academic duties include initiation and conduct of research, supervision of graduate students and teaching at both the undergraduate and graduate level. The initial appointment is for a three year term beginning July 1, 1980 or as soon as possible thereafter. Closing date for applications is June 13, 1980. Applications including Curriculum Vitae and names of three referees should be sent to: Dr. G.F. Chess, Dean, Faculty of Engineering Science, The University of Western Ontario, London, Ontario, Canada, N6A 5B9.

ENGINEERING- AGRICULTURAL

MCGILL UNIVERSITY. Faculty of Agriculture. Department of Agricultural Engineering. The Department of Agricultural Engineering at Macdonald Campus of McGill University has a teaching and research position open. A good capability for instruction in basic engineering sciences is required, as well as competence in some of the applied agricultural engineering fields. A Ph.D. degree in agricultural engineering or other appropriate engineering discipline is desired, in addition to an agricultural background. Candidates should be able to qualify for membership in the Ordre des Ingénieurs du Québec. Yaarly appointments would be made at the rank of University Lacturer for three years, with the possibility of advancement occuring after that period. Closing date for application: June 30, 1980. Applicants should forward a curriculum vitae together with the names of three references to: Dr. E. McKyes, Chairman, Department of Agricultural Engineering, Macdonald Campus of McGill University, Ste-Anne de Bellevue, Quebec, H9X 1C0.

ENGINEERING- CHEMICAL

MCGILL UNIVERSITY. Department of Chemical Engineering. Applications are invited for a tenure track appointment as Assistant or Associate Professor. The appointee will be expected to develop a vigorous research program in a department which has a high level of research activity. As there are several alternatives as to areas of specialization to strengthen through this appointment, the research area for this appointment is not specified. Salary and rank commensurate with qualifications. Appointment open until filled. Send rasumé, names of three referees, and statement of teaching and research interests to Dr. W.J.M. Douglas, Chairman, Department of Chemical Engineering, 3480 University Street, Montreal, Quebec, H3A 2A7.

UNIVERSITY OF ALBERTA. Department of Chemical Engineering. Applications are invited for a regular academic appointment at the assistant or associate professor level The successful applicant will be expected to teach core chemical engineering courses and to establish a vigorous research program that will compliment industrial activity in the province. A curriculum vitae, the names of three references end a summary of current and future research interests should be submitted to: Professor F.D. Otto, Chairman, Department of Chemical Engineering, University of Alberta, Edmonton, Alberta, T6G 2G6. The University of Alberta is an equal opportunity employer.

UNIVERSITY OF WINDSOR. Department of Chemical Engineering. Applications are invited for one tenure track appointment beginning July 1, 1980 in the Department of Chemical Engineering at the University of Windsor. Rank and salary are open depending on the qualifications of the individual. Applicants should have a strong commitment to excellence in teaching at the undergraduate and graduate levels with interests in the area of Process Dynamics and Control. In addition to teaching, the appointee will be expected to develop his/her own research program consistent with Departmental goals. A doctorate in the field is required. Industrial experience is desirable but not essential. All well qualified candidates will be considered, but Canadian citizens and landed immigrants will receive preference. A curriculum vitae, a statement of research and teaching interests and the names of three referees (including the Ph.D. supervisor, if completing graduate studies) should be submitted to Dr. A.W. Gnyp, Department of Chemical Engineering, University of Windsor, Windsor, Ontario, Canada, N9B 3P4.

ENGINEERING- CIVIL

UNIVERSITY DF WINDSDR. Department of Civil Engineering. Applications are invited for one tenure track and one sessional appointment at the Assistant Professor rank (Associate Professor may be considered). Ph.D. or equivalent experience required. Duties include teaching undergraduate and graduate courses and conducting research in one of the following areas: sanitary/water resources; structures; transportation; soils/foundations. Appointment effective July 1, 1980 or as soon as possible thereafter. Applications, including curriculum vitae and the names of three referees, should be sent to Dr. G.R. Monforton, Head, Department of Civil Engineering, University of Windsor, Windsor, Ontario, N9B 3P4. Canadian citizens and landed immigrants ere especially invited to apply.

ENGINEERING- ELECTRICAL/COMPUTER

CONCORDIA UNIVERSITY. Department of Electrical Engineering. Research Position. Research Associates or Post-Doctoral Fellows are required to work in the Department of Electrical Engineering at Concordia University. Applicants should hold a doctorate. Appointments will be made in one or more of the following areas: advanced number-theoretic topics in digital signal processing including computational complexity and its relation to the synthesis of error-correcting codes; computer-aided circuit and systems design, and mathematical programming; error-correcting codes, digital modulation techniques, and spread spectrum systems; multivariable networks, and two-dimensional digital filters; numerical techniques in electromagnetics, electromagnetic compatibility, and geomefric theory of diffraction; RC-active, switched-capacitor end digital filters; system identification and control. Applications, which should include curriculum vitae and the names of three referees, should be eddressed to: Dr. A. Antoniou, Cheirman, Deperfment of Electrical Engineering, Concordia University, 1455 de Maisonneuve Boutevard West, Montreat, Quebec, H3G 1M8, Canada.

UNIVERSITY DF WATERLDO. Department of Electrical Engineering. Assistant professor level, one probationary in a tenure-stream and one definite term, in the areas of Computers and Microwaves/Antennas. Applicants must hold a doctorate and have a strong commitment to both undergraduate and graduate teaching and research. Industrial experience would be considered an asset and a demonstrated aptitude for research is essential. An appointment for September 1980 is anticipated at a salary commensurate with experience and qualifications. A detailed resumé, a statement of teaching and research interests and the names of three referees should be sent to: Chairman, Department of Electrical Engineering, University of Waterloo, Waterloo, Dntario, N2L 3G1, Canada. First consideration will be given to those applicants who are legally eligible to work in Canada at the time of application. Subject to the availability of funds.

MCMASTER UNIVERSITY. Department of Electricel end Computer Engineering. Dne tenurable position is open preferably at the Assistant Professor level but possibly at the Associate Professor level. Candidates must have a strong commitment to undergraduate and graduete teaching, and a good research record with the potential to pursue vigorous independent research. Preference will be given to candidates with demonstrated proficiency in hardware and/or software aspects of computer engineering and modern control systems. A Ph.D. and refereed publications are essential. Resumés, including the names and addresses of three referees should be addressed to Dr. D.P. Taylor, Chairman, Department of Electrical and Computer Engineering, McMaster University, Hamilton, Dntario, Canada, L8S 4L7.

UNIVERSITY OF OTTAWA. Department of Electricel Engineering. Dttawa, Canada — Computer Engineering. Excellent opportunity. Tenure track faculty position in Computer Engineering. We seek an ambitious individual, preferably computer hardware oriented, to contribute to our dynamic program at the undergraduate and graduate level, and to develop his own research. A Ph.D. degree is required. Industry experience is an asset. Ottawa offers a unique opportunity in Canada for industrial research contacts and consulting. Start: as early as possible. Please send resumé and names of references to Dr. Wolfgang J.R. Hoefer, Chairman, Department of Electrical Engineering, University of Ottawa, Dttawa, Dntario, Canada, K1N 6N5, Tel: (613) 231-2493.

UNIVERSITY OF WINDSDR. Dapartmanf of Elactrical Engineering. Applications for both a tenure track and temporary positions starting July 1, 1980 are invited for the Department of Electrical Engineering. A Ph.D. in Electrical Engineering and a clear potential for distinguished performance in teaching and research are required. Successful applicants will be expected to teach undergraduate and graduate courses and conduct research in one or more of the following areas: System and Control Theory, Digital Electronics and Microprocessors, Digital Signal Processing, Computer-Aided Design, Field Calculation Methods, High Voltage Engineering, Power Systems and Energy Conversion Devices. Applications should be sant to Dr. A.H. Oureshi, Head, Department of Electrical Engineering, University of Windsor, Windsor, Ontario, N9B 3P4. Applications will be accepted until the positions are filled.

UNIVERSITY OF TORONTO. Dapartmant of Elactrical Engineering. The Department of Electrical Engineering, University of Toronto, has an opening for a research associate in the area of Power Electronics. Appointment to be effective July 1, 1980. Master's degree in Electrical Engineering required. Applications should be sent to: The Assistant Chairman (Administration), Department of Electrical Engineering, 35 St. George Street, Toronto, Ontario, M5S 1A4, Canada.

ENGINEERING- INDUSTRIAL

UNIVERSITY DF WINDSDR. Dapartmant of Industrial Enginaering. Applications are invited for faculty positions in the area of production systems and operations research. Duties include teaching at the graduate and undergraduate levels, supervision of graduate students' research, pursuit of sponsored research and research and scholarship in Industrial Engineering. A Ph.D. in Industrial Engineering and a BASc degree in Engineering are required. Prior industrial experience is desirable. Starting salary is negotiable. Applicants should send their resumé along with the names of three referees to Dr. A. Raouf, Head, Department of Industrial Engineering, University of Windsor, Windsor, Ontario, N9B 3P4. Telephone (519) 253-4232 ext. 310.

ENGINEERING MANAGEMENT PROGRAM

UNIVERSITY OF OTTAWA. Engineering Menegement Program — Faculty of Science and Enginaering. The Faculty of Science and Engineering invites applications for appointment in a recently introduced Engineering Management Program. This will be a tenure track position with appointment to a rank that will be commensurate with the qualifications of the candidate. Duties will include teaching and research, and active involvement in the further development of the program. Candidates should hold a doctoral degree, preferably in Industrial engineering. Industrial experience will be considered as a significant advantage. Bilingualism (French and English) would be an asset. Applications including curriculum vitae, details of experience and names of referees should be addressed to Dr. A.S. Krausz, Chairman, Department of Mechanical Engineering, University of Dttawa, Ottawa, Dntario, K1N 6N5.

ENGINEERING-MECHANICAL

UNIVERSITY DF BRITISH CDLUMBIA. Department of Mechanicel Engineering. A tenure-track position is available for September 1, 1980 or July 1, 1981 in Heat Transfer or Thermodynamics. Younger candidates of outstanding research and lecturing potential are being sought for appointment at the Assistant Professor or possibly the Associate Professor level. Preference will be given to candidates with lecturing experience and the Ph.D. degree or high quality industrial experience. Salary will depend on qualifications and experience. For the session 1980-1981 only, a one-year appointment would be considered, so that faculty on leave from other institutions may wish to apply. Write to: Professor Philip G. Hill, Head, Department of Mechanical Engineering, University of British Columbia, Vancouver, British Columbia, V6T 1W5, Canada.

RDYAL MILITARY CDLLEGE OF CANADA. Department of Machanical Enginaering. Level to be determined. Ph.D. or equivalent with teaching/industrial experience. Primary duties are teaching of undergraduate courses in mechanics, mechanical systems/machine design, and personal research. Postgraduate instruction and supervision as required. Salary commensurate with experience and qualifications. Applications should be sent to: Dr. J.G. Pike, Head, Mechanical Engineering Department, Royal Military College, Kingston, Ontario, K7L 2W3. Appointment to commence 1 September 1980 or earlier.

UNIVERSITY OF WATERLOD. Dapariment of Machanical Enginaering. 1. Assistant Professor. Tenure track position, initial appointment will be for Ihrea years. 2. A recent Ph.D. graduate with experience in digital and analog control of mechanical systems. 3. Teaching responsibilities will be primarily at the undergraduate and graduate level in control and automation. The successful applicant will be expected to contribute to the department's research in this area. He will interact with faculty who have ongoing projects in this and related areas such es fluid power, machinery diagnostics and noise control. 4. Salary will be commensurate with experience and qualifications. 5. A detailed curriculum vitae, a statement of teaching and research interests and the names of three referees should be sent to: Dr. D.J. Burns, Chairman, Department of Mechanical Engineering, University of Waterloo, Waterloo, Dntario, N2L 3G1. 6. September 1st, 1980 preferred. 7. No closing date for receipt of applications. (Subject to the availability of funds). First consideration will ba given to those applicants who at the time of application are legally eligible to work in Canada for the period covered by this position.

CDNCDRDIA UNIVERSITY. Dapartmanf of Mechanical Enginaering. The Department of Mechanical Engineering at Concordia University is seeking applications for full-time faculty positions at the Assistant Professor rank to start June 1980 or soon thereafter. The Department offers B.Eng., M.Eng., and Ph.D. programs, has a well established faculty research activity. Candidates should have a Ph.D. with proven ability to conduct significant independant research and a high promise of excellance in teaching. Preference will be given to those who can teach a range of coursas including laboratory supervision in the area of mechanics, mechanical design and drafting, manufacturing and production. The successful applicant will be expected to seek outside funding for research projects, demonstrate schoiarly productivity through publications in journals and develop fruitful contacts with local industries. Salary range (1978-79) $19,853-$25,610. Applications including detailed curriculum vitae with names of three referees should be sent to Dr. T.S. Sankar, Chairman, Department of Mechanical Engineering, H929, Concordia University, 1455 de Maisonneuve Blvd. West, Montreal, Quebec, H3G 1M8.

UNIVERSITY DF WINDSOR. Department of Mechenical Engineering. Applications are invited for tenure track and sessional appointments in the Department of Mechanical Engineering at the Assistant and Associate Professor rank. A Ph.D. or equivalent experience is required. Successful applicants will be expected to teach undergraduate and graduate courses as well as conduct research in one of the following areas: thermo-fluids, energy conservation, design and control of machine elements, sound and vibration control. Appointment effective July 1, 1980 or as soon as possible thereafter. Applications. Including curriculum vitae and the names of three referees should be sent to Dr. T.W. McDonald, Head, Mechanical Engineering Department, University of Windsor, Windsor, Dntario, N9B 3P4.

ENGLISH

UNIVERSITY OF NEW BRUNSWICK. SAINT JDHN CAMPUS. Department of English. Applications are invited for a possible position (subject to funding) in English, teaching

undergraduate courses in Modern American Literature (preferably including Science Fiction) and British Literature prior to 1800. The current floor for Assistant Professor (under negotiation) is $15,597. Applications, including a curriculum vitae, transcripts and three letters of reference should be sent by 30 May, 1980 to: Dr. Winnifred Bogaards, Chairman, Division of Humanities and Languages, Saint John Campus, University of New Brunswick, P.O. Box 5050, Saint John, New Brunswick, E2L 4L5.

COLLEGE OF CAPE BRETON. Department of Languages, Letters and Communication. 1. Rank: assistant professor, probationary position (tenure track). 2. Ph.D., or near completion, and post-secondary teaching experience. 3. At least two of the following areas: Freshman English, Seventeenth Century, Victorian. Preference to applicant with experience in refresher or Remedial English instruction. 4. Dependent on qualifications and experience. 5. Dr. Phyllida Kent, Department of Languages, Letters and Communication, College of Cape Breton, P.O. Box 5300, Sydney, Nova Scotia, B1P 6L2. 6. Commencing date July 1, 1980. 7. When position filled.

ENVIRONMENTAL DESIGN

UNIVERSITY OF CALGARY, Faculty of Environmental Design. Academic appointment in Landscape Architecture. The candidate must have an advanced degree (or equivalent) in landscape architecture or a related professional subject. Preference will be given to candidates who combine practical experience with demonstrated teaching ability. The successful applicant will be responsible for teaching and research that apply landscape architecture knowledge and skills to a variety of tasks, [illegible] the development of regional plans. An important medium will be studio teaching with emphasis on graphic expression of analyses and design proposals. This appointment will be made at the Assistant Professor rank; date of appointment is open. Apply in writing, including cv and expression of interests, to: Dean W.T. Perks, Faculty of Environmental Design, The University of Calgary, 2500 University Drive, Calgary, Alberta, Canada, T2N 1N4.

GEOLOGY/GEOCHEMISTRY

UNIVERSITY OF NEW BRUNSWICK. Department of Geology. Assistant Professor for one year limited term appointment. Specialization in one or a combination of geochemistry, environmental geology, petroleum geology or stratigraphy. Teaching duties will include introductory geology and undergraduate stratigraphy, geochemistry, or environmental geology courses. Candidates may have an opportunity to assist with graduate student supervision. Initial salary contract currently under negotiation. Effective date of appointment September 1, 1980 or possibly July 1, 1980. Curriculum vitae and names of two references to the Chairman, Department of Geology, University of New Brunswick, Fredericton, New Brunswick, E3B 5A3.

UNIVERSITY OF NEW BRUNSWICK. Department of Geology. Applications are invited for a post-doctoral or research associate position working on mineral chemistry in sulfide deposits. Analytical work will involve the use of an energy dispersive micro-analytical facility (Kevex) on a S.E.M. Familiarity with micro-analytical methods of analyses of minerals is essential and a geological background would be an asset. The appointment will last for at least two years. Salary will be based on NSERC post-doctoral rates. Send resumé and names of three referees to Dr. D.J. Bachinski, Department of Geology, University of New Brunswick, P.O. Box 4400, Fredericton, New Brunswick, E3B 5A3.

UNIVERSITY OF NEW BRUNSWICK. Department of Geology. Research Associate in the field of geochemistry. Candidates will be expected to develop an independent field of research and to assist with the direction and supervision of graduate students. Duties will include a limited teaching role. Post-doctoral research experience in industry, government or academic environments considered an asset. Candidates must hold a Ph.D. Appointment effective September 1, 1980. Competitive salary with an initial three year appointment. Reappointment or transfer to tenure track to be considered at the end of the initial appointment. Applications including a curriculum vitae and names of three referees should be sent to: Chairman, Department of Geology, University of New Brunswick, Fredericton, New Brunswick, E3B 5A3.

UNIVERSITY OF CALGARY. Department of Geology and Geophysics. The Department of Geology and Geophysics is now accepting applications for a professor with specialization in structural geology. Responsibilities involve instructing at undergraduate and graduate levels as well as conducting and supervising research projects. This appointment may be made at the Assistant or Associate Professor level, depending upon qualifications and experience and the initial contract will be for 3 years. The position becomes available July 1, 1980. Preference will be given to candidates who are knowledgeable in stress-and-strain analysis. Interested persons should submit a letter of application, vitae, undergraduate and graduate transcripts and three letters of recommendation to: Dr. N.C. Wardlaw, Department Head, Geology and Geophysics, The University of Calgary, 2500 University Drive, Calgary, Alberta, T2N 1N4.

INFORMATIQUE/RECHERCHE OPERATIONNELLE

UNIVERSITE DE MONTREAL. Faculté des arts et des sciences. Département d'informetique et de recherche opérationnelle. Deux postes de professeur: Le Département d'informatique et de recherche opérationnelle est à la recherche de deux professeurs de carriére. Fonctions: Enseignement aux trois cycles — baccalauréat, maitrise, doctorat; recherche; encadrement d'étudiants gradués. Exigences: Doctorat, ou l'équivalent, en systèmes opératoires, en langage de programmation, en bases de données, en informatique appliquée à la gestion ou dans un domaine connexe. Traitement: Selon les normes de la convention collective en vigueur. Date d'entrée en fonction: Le 1er juin 1980. Date de clôture des candidatures: Le 31 mai 1980. Les candidats sont priés de faire parvenir leur curriculum vitae à: M. Robert Cléroux, Directeur, Département d'informatique et de recherche opérationnelle, Université de Montréal, C.P. 6128, Succersale A, Montréal (Québec), H3C 3J7.

ROYAL MILITARY COLLEGE OF CANADA. Informetique. 1. Le Royal Military College of Canada offre deux postes au niveau de professeurs adjoints. 2. Les candidats devraient avoir obtenu le Ph.D. en sciences de l'ordinateur ou dans un champs associé. Les spécialités cherchées sont: les languages de programmation et les compilateurs, les systèmes d'opération, les systèmes de gestion des données, les communications en mode digital, les réseaux d'ordinateurs, la logique digitale et ses applications aux périphériques, le contrôle digital en temps réel, la conception des systèmes, la conception du logiciel. 3. Les tâches comprendront le support des activités du centre de calcul, l'enseignement au premier et deuxième cycles, et la recherche. La majorité du travail doit se faire en anglais mais la connaissance des deux langues officielles constitue un avantage ainsi que l'égilibilité aux associations d'ingénieurs professionnels. 4. Echelle des salaires (1979-80): $19,400-$28,500, dépendant de l'expérience et des qualifications. 5. Les applications accompagnées d'un curriculum vitae et des noms de trois personnes qui pourront fournir des références devraient être adressées à: Dr. R. Benesch, Directeur du T.A.D., Royal Military College of Canada, Kingston, Ontario, K7L 2W3. 6. Date of nomination: ouvert. 7. Ouvert.

JEWISH STUDIES

MCGILL UNIVERSITY. Jewish Studies Program. The Jewish Studies Program at McGill will make a one year replacement appointment to cover parts of positions in Hebrew literature and Biblical studies while two professors will be on sabbatical. The successful applicant will hold the Ph.D. and will be appointed at the rank of Assistant Professor. His teaching responsibilities will include (1) Advanced Hebrew (six credits of third year Hebrew including readings from varied aspects of Hebrew literature); (2) Jewish Studies I (three credits — an introductory course on the Bible and the ancient Near East using English texts); (3) A Book of the Bible (three credits — any entire Biblical book to be studied in the original Hebrew); (4) Two half-courses (six credits) of graduate work in some aspect of the history of Jewish interpretation of the Bible. Completed academic dossiers including references and proposals for the contents of the graduate courses should be forwarded to: Professor B. Levy, at 3511 Peel Street, Montreal, Quebec, H3A 1W7.

LANGUAGES

MCMASTER UNIVERSITY. Faculty of Humanities. Department of Romance Languages. French. Applications are invited for an Assistant Professor of French for a contractually limited period of 2 years, 1980-82. Ph.D. in Linguistics required; experience in the theory and practice of foreign language teaching, including audio-visual methodology; publications preferred. Salary depending on qualifications. Assistant Professor floor level for 1979-80 is $17,850. Applications including curriculum vitae and names of three referees should be sent to: Chairman, Department of Romance Languages, McMaster University, 1280 Main Street West, Hamilton, Ontario, L8S 4M2. Position available July 1. 1980.

LATIN AMERICAN STUDIES

SIMON FRASER UNIVERSITY. Latin American Studies Program. Applications are invited for a Visiting Assistant Professor appointment in Latin American Studies (appointment subject to budgetary approval). Applicants should have academic specialization in a discipline or disciplines related to Latin America, e.g. history, sociology, anthropology, political science, archaeology, geography, etc. Recognized achievement in the arts or public life may be substituted for the above. Extensive experience in Latin America and a command of English is required. Duties will be interdisciplinary teaching in the undergraduate level. Salary will be commensurate with qualifications. The appointment will be made for either the Fall Semester 1980 (Sept. 1-Dec. 31/80) or the Spring Semester 1981 (Jan. 1 - Apr. 30/81). Please send applications accompanied by supporting documentation and the names of three references to the Co-ordinator, Latin American Studies Program, Simon Fraser University, Burnaby, British Columbia, V5A 1S6. Deadline for applications is May 31, 1980 for a Fall Semester appointment or July 15, 1980 for a Spring Semester appointment. *Appointment subject to budgetary approval.

LIBRARY SCIENCE

UNIVERSITY OF MANITOBA. Elizabeth Dafoe Library. Education Library. The University of Manitoba Libraries invite applications for: Reference Librarian, Education Library. Responsibilities include provision of reference services, library orientation, development of reference collections, assistance to users in the preparation of profiles for computerized data base search services. Hours of service include some weekend and evening hours. The Education Library, one of 13 libraries in the University of Manitoba Library system, has collections of approximately 75,000 volumes, plus a variety of special collections and instructional material; a staff of 15 including 3 librarians. Primary users are 3,000 faculty and students in the Faculty of Education and School of Physical Education. Qualifications: A degree from an accredited library school; an education degree is an important asset; previous reference experience in an academic library preferred; personal qualitications of good human relations skills, initiative, and resourcefulness. Canadian citizens, landed immigrants and others eligible for employment in Canada at the time of application are especially encouraged to apply. Salary: Starting salary up to $15,000 (under review) depending on qualifications. There is a two-year probationary period. Curriculum vitae together with the names of 3 referees and salary requirements should be submitted as soon as possible to Paul Wiens, Assistant Director for Administration (Libraries), Elizabeth Dafoe Library, University of Manitoba, Winnipeg, Manitoba, R3T 2N2.

UNIVERSITY OF TORONTO. Faculty of Library Science. Assistant Professor. To teach courses and engage in research in the application of communications technology to libraries and information system; some responsibility for development of technical support facilities and staff. Qualifications: Ph.D. in Library or Information Science completed or near completion with undergraduate degree in communication or A/V technology preferred; or applicants with doctorates in communications technology (e.g. telecommunications) and demonstrated interest in the application of advanced communications technology to the field of library science will also be considered; or applicants with advanced degrees in educational media also considered if they have the required technological expertise and M.L.S. degree or proven interest in library science applications. Current minimum salary for rank: $17,400 (1980-81 salary under negotiation). Position open January 1, 1980; 3-year contractual appointment. Closing date for receipt of applications: May 30, 1980. Send curriculum vitae and names of 3 referees to Dr. Katherine H. Packer, Dean, Faculty of Library Science, University of Toronto, 140 St. George Street, Toronto, Ontario, M5S 1A1.

UNIVERSITY OF ALBERTA. Faculty of Library Science. The Faculty of Library Science, University of Alberta, is considering applications for the position of Assistant Professor of Library Science. Date of opening: July 1, 1980. Qualifications: Master's degree in Library Science and library experience essential. Doctoral degree or doctoral studies and teaching experience preferable. Responsibilities: Chief responsibility in one or more of the following areas: library collections in the social sciences or humanities including non-print materials; public library community programs and specialized library services; administrative decision-making in libraries, library systems and networks. Applicants with supplementary qualifications in cognate areas will be welcomed. Rank and salary: Appointment at the Assistant Professor level. Salary is presently $19,696 to $25,575 (12-month basis) depending on qualifications and experience. Application deadline: Until filled. Procedure: Interested candidates should send a letter of application, curriculum vitae and names of three references to: W.J. Kurmey, Dean, Faculty of Library Science, University of Alberta, Edmonton, Alberta, T6G 2J4. The University of Alberta is an equal opportunity employer.

MANAGEMENT

UNIVERSITY OF CALGARY. Faculty of Management. The University of Calgary, Faculty of Management, is seeking qualified candidates to fill positions in all areas including Accounting, Policy and Environment, Finance, Industrial Relations, Management, Marketing, Management Science and Management Information Systems beginning July 1, 1980. Ph.D. or D.B.A. preferred. Rank and salary based on qualifications and experience. Applications should be addressed to: Dr. George S. Lane, Dean, Faculty of Management, The University of Calgary, Calgary, Alberta, T2N 1N4.

MEDICINE

UNIVERSITY OF TORONTO. Faculty of Medicine. 1. University Department: Paediatrics. University Title: Assistant Professor or Associate Professor. 2. Qualifications Required: Registration or eligibility for registration with the Ontario College of Physicians and Surgeons necessary. F.R.C.P. (C) or equivalent an advantage. 3. Nature of Duties: Patient care, undergraduate and graduate teaching and clinical research. 4. Salary: Negotiable. 5. Person to Whom Inquiries Should Be Sent: Dr. R.M. Ehrlich, Professor of Paediatrics and Chief of the Division of Endocrinology, Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, M5G 1X8. 6. Effective Date of Appointment: Open. 7. Closing Date for Receipt of Applications: August 31, 1980.

QUEEN'S UNIVERSITY. Department of Pathology. Cancer/Cell Biology/Genetics. Applications are invited for the position of Assistant Professor in the Cancer Laboratories of the Department of Pathology, Queen's University, Kingston, Ontario, Canada. This is a limited, short-

tarm (3 years) appointment, but could be renewable on a competitive basis. Applicants must have a background in cell biology and immunobiology with an interest, and preferably a training in somatic cell genetics. Applications, with curriculum vitae, should be forwarded to: Dr. David M. Robertson, Professor and Head, Department of Pathology, Dueen's University, Kingston, Dntario, Canada, K7L 3N6.

THE DNTARID CANCER TREATMENT AND RESEARCH FDUNDATIDN. LDNDDN CLINIC. Medical Oncologist. Physician trained in Medical Dncology required to replace a retiring member at the Dntario Cancer Treatment and Research Foundation London Clinic. The Clinic provides care for 2,500 new cancer patients and provides all treatment modalities excepting major surgery. The Clinic is associated with the University of Western Ontario and the applicant must be eligible for appointment (part-time) to the Faculty of Medicine. There are teaching responsibilities at both undergraduate and postgraduate levels. A research interest would be considered an asset. Enquiries to: Dr. T.A. Watson, Director, The Ontario Cancer Foundation London Clinic, Victoria Hospital, London, Ontario, N6A 4G5.

UNIVERSITY OF TORONTO. FACULTY OF MEDICINE. Benting and Best Department of Medical Research. University Title: Assistant Professor (Tenure stream). Qualifications required: Ph.D. in Molecular Biology and/or biochemistry; several years of postdoctoral experience and preferably experience at the professorial level in directing an independent research program in the area of regulation of gene expression. Nature of Duties: Research is a primary mission in the Banting and Best Department of Medical Research. The position also carries teaching responsibilities at the undergraduate and graduate level largely through the program in Molecular Biology. Salary: $20,000-$32,500. Person to whom enquiries should be sent: Dr. David H. MacLennan, Banting and Best Department of Medical Research, University of Toronto, Charles H. Best Institute, 112 College Street, Toronto, Dntario, Canada. M5G 1L6. Effective Date of Appointment: July 1, 1980. Closing Date for Receipt of Applications: June 1, 1980.

UNIVERSITY DF ALBERTA. Faculty of Medicine. Experienced Academic Electrocardiographer. The Faculty of Medicine and the University of Alberta Hospital (with Alberta Heritage Applied Cardiac Research funding), are seeking a clinical research cardiologist with special experience in electrocardiopathy and invasive electrocardiography. Duties will include administration of the ECG lab, involvement with the ongoing development of computer assisted ECG interpretation, performance of intracardia electrophysiologic studies and activities in the Pacemaker Clinic. Please reply with curriculum vitae and names of three referees to: Dr. R.F. Taylor, Acting Director, Division of Cardiology, Department of Medicine, 6-124B Clinical Sciences Building, University of Alberta, Edmonton, Alberta, T6G 2G3.

UNIVERSITY DF BRITISH COLUMBIA. Faculty of Medicine. Acute Care Hospital. Nucleer Medicine. Director of Division of Nuclear Medicine and Radiopharmacist required for University of British Columbia, Acute Care Hospital. The positions will carry with them the appropriate university appointments. Preference will be given to Canadian applicants. Applications with accompanying curriculum vitae should be sent to: Dr. W. Thurlbeck, Director of Leboratories, Acute Care Hospital, University of British Columbia, Faculty of Medicine, 2075 Wesbrook Mall, Vancouver, British Columbia, V6T 1W5.

UNIVERSITY DF SASKATCHEWAN. College of Medicine. Department of Microbiology. The College of Medicine has an immediate opening for an infectious disease physician — medical microbiologist. The opening is for a tenure treck appointment at the level of assistant or essociate professor in the Department of Microbiology. The successful applicant will be expected to teach in the medical microbiology program and to develop en independent research program in infectious disease. Moreover, a unique opportunity is available for a suitable candidate to undertake a leadership role in developing infectious disease clinical training programs at University Hospital. Selary is negotiable, commensurate with experience. Interested persons should reply to Dr. D. Eldinger, Head, Department of Microbiology, University of Saskatchewan, Saskatoon, Saskatchewen. Please provide curriculum vitae and names of three persons from whom letters of referance can be obtained.

MUSIC

UNIVERSITY DF SASKATCHEWAN. Department of Music announces one-year sabbatical replacement position. Duties: Director of University Wind Ensemble, teach two trom among Brass Techniques class, Wood wind Techniques class, Conducting class, Music Administration class. Requirements: Instrumental conducting background, experience in brass or woodwinds and administration. Date of employment: September 1, 1980-June 30, 1981 (10 months). Rank and salary: Assistant Professor at $16,260 for 10 months on 1979-80 scale. Send complete dossier to D.L. Kaplan, Head, Department of Music, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0. Applications will be accepted until May 30, 1980.

CONCORDIA UNIVERSITY. Faculty of Fine Arts. Division of Performing Arts (Music Section). Position available effective July 1, 1980. The Faculty's Division of Performing Arts (Music Section) invites applications for an experienced performar-teacher in Studio Music (Jazz, Rock, Pop, and related areas). Teaching responsibilities include ensemble workshops as well as one or more courses in jazz theory, composition, arranging or improvisation. The successful candidate will also be expected to participate in faculty performance. Bilingualism is considered an asset (English and French). Dualifications: M.Mus. or M.M.A. in Jazz Studies (or equivalent) or extensive professional experience. Salary and Rank: According to qualifications and experience. The deadline for applications is June 1, 1980, or until the position is filled. Applications should be accompanied by a complete curriculum vitae and the names of at least three persons who are familiar with the applicant's work and who would be prepared to provide references. Please address all inquiries and/or applications to: S. Friedland, Director, Performing Arts, Faculty of Fine Arts, Concordia University, 7141 Sherbrooke Street West (HB-103), Montreal, Quebec, H4B 1R6.

YORK UNIVERSITY. Faculty of Fine Arts. Department of Music. The York University Department of Music has a vacancy for a sessional lecturer in musicianship, elementary music theory and history. The appointment will run September 1, 1980 to April 30, 1981. Applications should be sent to: Professor David Lidov, Acting Chairman, Department of Music, York University, 4700 Keele Street, Downsview, Ontario, M3J 1P3. Closing date is May 31st, 1980 or until position has been filled.

UNIVERSITY OF MANITOBA. School of Music. A violin instructor is required. D.M.A. or equivalent is preferred, with successful studio teaching and performance experience. Duties to include teaching violin majors and developing the string program. Ability and interest in a related area (orchestral conducting, pedagogy and literature, chamber music) an asset. Salary and rank commensurate with qualifications and experience. Date of appointment 1 September, 1980; deadline for applications when filled. Applicants should submit curriculum vitae, nemes of three referees and a tepe recording made recently to Professor Paul W. Paterson, Director, Schooi of Music, Universlty of Manitoba, Winnipeg, Manitoba, R3T 2N2. Canadian citizens and others eligible for employment in Canada at time of applicalion are especially encouraged to apply.

UNIVERSITY DF MANITDBA. School of Music. Position in theory/composition. Should hold a Ph.D. with successful teaching experience and scholerly activities. Duties include teaching of undergraduate theory; abilily to teach aurel skills and/or related academic areas an asset. Salary and rank according to qualifications and experience (1979 assistant professor floor — $17,798.). Effective date of appointment 1 September, 1980. Closing date for applications is when position filled. Send applications, with curriculum vitae and three references to Professor Paul W. Paterson, Director, School of Music, University of Manitoba, Winnipeg, Manitoba, R3T 2N2. Canadian citizens and others eligible for employment in Canada at time of applicalion are especially encouraged to apply.

NATIVE STUDIES

UNIVERSITY OF NEW BRUNSWICK. Faculty of Education, Indian Studies/Language Arts/English (Native Indian Students' Program). A faculty member is required at the rank of Assistant or Associate Professor to instruct introductory courses in Indian Studies and Language Arts/English in a campus and field based project designed to provide a four-year B.Ed. (Elementary) degree for a group of native Indian students. The initial appointment will be for the period July 1, 1980 to June 30, 1981, and will be subject to consideration for renewal for one additional year. A completed graduate degree, teaching or work experience with native people, and acceptable knowledge of native language(s) (Micmac and/or Maliseet) is required. Salaries and benefits will be in accordance with regular U.N.B. scales and plans. This position is subject to budgetary approval. Please apply to Dr. Marian Small, Chairman, Curriculum and Instruction Division, Faculty of Education, University of New Brunswick, Fredericton, N.B., E3B 5A3, submitting curriculum and names of three references.

ST. THOMAS UNIVERSITY. Native American Studies. St. Thomas University, Fredericton, N.B., invites applications for the position of visiting professor of Native Studies. The appointment is for one year beginning 1 July 1980. This position is open to all ranks and areas of specialization within the field of North American Indian Studies. Salary is dependent upon qualifications and hiring is subject to budgetary approval. Candidates must have completed the M.A., but Ph.D., or near, preferred. Responsibilities include undergraduate teaching and assisting director in developing a Native Studies programme. Applicants should file immediately. Send vitae and two letters of recommendation to Dr. H. Goltz, Director of Native Studies, St. Thomas University, Fredericton, New Brunswick, E3B 5G3.

PHARMACY

UNIVERSITY OF TORONTO. Faculty of Pharmacy. Applications are invited for a tenure-stream appointment at the level of assistance or associate professor and commencing 1st July 1980. Priority will be given to candidates offering experience in the areas of either clinical pharmacy or physical chemistry as applied to pharmacy, but highly qualified candidates working in other areas of pharmaceutical science would also be considered. The successful applicant will have had post-doctoral experience and will be expected to do R&D with research and teach undergraduate and graduate pharmacy students. A background in pharmacy would be useful but not essential. Applications with resumé and names of referees should be forwarded to R.M. Baxter, Dean, Faculty of Pharmacy, University of Toronto, Toronto, Ontario, Canada, M5S 1A1.

PHYSICAL EDUCATION/ RECREATION

UNIVERSITY OF WATERLDO. Department of Recreetion. 1. Assistant or Associate Professor in Recreation Management. 2. Earned doctorate or its near completion in related discipline. 3. Ability to successfully supervise student theses and honors projects with a broad interdisciplinary view to graduate and undergraduate instruction and continued involvement and participation in professional organizations with a demonstrated competence and commitment to scholarship. 4. Assistant professor (minimum $18,400); Associate professor (minimum $23,900). Salary commensurate with qualifications and experience. 5. Dr. David Ng, Chairman, Department of Recreation, University of Waterloo, Waterloo, Ontario, N2L 3G1. 6. Subject to the avaliability of funds. 7. Until position tilled. First consideration will be given to those applicants who at the time of application are legally eligible to work in Caneda for the period covered by this position.

BRANDON UNIVERSITY. Department of Physical Education and Recreational Services. The Department of Physical Education and Recreational Services, Brandon University, invites applications from those individuals interested in the following term appointment. Position: A 9-month term appointment as instructor in Physical Education, Athletic Therapist and Coordinator of Intramural Sports programs. Responsibilities: Be prepared to teach courses in Prevention and Care of Athletic Injuries and Health Education, serve as Athletic Therapist and Coordinate intramural and extramural sports programs. Dualifications: Master's degree or its equivalent preferred. Previous experience in areas of responsibility required. Contract: This is a 9-month term appointment, beginning August 1, 1980 and ending April 30, 1981. The person holding the present position will be on a one year leave of absence. Salary: Commensurate with qualifications and experience. Applicants are asked to submit letters of application, a resumé and three letters of reference to: Dr. Dale T. Hayes, Dean, Faculty of Education, Brandon University, Brandon, Manitoba, R7A 6A9.

PHYSIOLOGY

UNIVERSITY DF TDRONTO. Faculty of Dentistry. Post-doctoral research position is available immediately for 1 or more years for person with experience in sensory and/or motor neurophysiology to join ongoing studies of primary afferent, brainstem and higher centre mechanisms of orofacial pain, or mastication, swallowing and related sensorimotor activities. Salary and academic rank (honorary) commensurate with experience. Apply, with curriculum vitae and three letters of reference to: Dr. B.J. Sessle, Professor and Chairman, Division of Biological Sciences, Faculty of Dentistry, University of Toronto, 124 Edward St., Toronto, Ontario. M5G 1G6.

POLITICAL STUDIES

TRENT UNIVERSITY. Department of Political Studies. Applications are invited for a lecturer or assistant professor in the Department of Political Studies. Responsibilities will include undergraduate teaching in introductory course and one or more of the following areas: international relations; public administration and public policy; comparative politics. Candidates must have completed or be nearing completion of a Ph.D. Salary range (1979-1980) $14,318-$17,570 (floor of assistant professor scale). Applications including curriculum vitae, transcripts, and names of three referees should be submitted to Professor Margaret Doxey, Chairman, Department of Political Studies, Trent University, Peterborough, Dntario, K9J 7B8. This appointment is subject to budgetary approval.

PSYCHOLOGY

QUEEN'S UNIVERSITY. Department of Psychology. Applications are invited for two positions at the level of Assistant Professor. The first of these is for a Clinical Psychologist with active involvement in clinical training and service. Applicants should also have an excellent research record, and should note that the orientation of the clinical programme is strongly empirical/behavioral. The second position is not restricted as to field, but preference will be given to candidates in some area of biopsychology. Applicants for this position must also have demonstrated independent research ability at a high level; some teaching experience is desirable but not necessary. Both positions are regular three year appointments, i.e. tenure-track appointments according to regulations recently adopted at Dueen's. Letters of application, together with e curriculum vitae and the names of three referees, should be sent to Dr. P.C. Dodwell, Head, Department of Psychology, Dueen's University, Kingston, Dnt., K7L 3N6. Preference will be given to Canadian Citizens and Landed Immigrants: men and women are encouraged equally to apply.

CDLLEGE OF CAPE BRETDN. Department of Psychology. 1. One or two probationary and/or terminal replacement positions at assistant professor level. 2. Ph.D. 3. Social/Developmentel with applied interests preferred but any speciality considered. 4. C.V. and names of three references to Dr. W. Clemens, Chairman, Psychology Department, College of Cape Breton, P.O. Box 5300, Sydney, Nova Scotia, B1P 6L2. 5. 1 July, 1980. 7. When position filled.

UNIVERSITY OF WATERLOD. Department of Psychology. Applications are being accepted tor the position of Assistant Pro-

fessor in Industrial/Organizational Psychology. While applicants in all areas of I/O will receive full consideration, those with special competence and interest in organizational behaviour will receive special consideration. Regardless of area of specialization, applicants should show considerable promise as a scholar and a commitment to the development of a strong, independent, sustained research program. In addition to research, responsibilities include teaching at both the graduate and undergraduate levels and supervision of student research. The person hired will be expected to contribute to the development of an expanded Ph.D. program in I/O and to an ongoing Master of Applied Science program in I/O. The salary is competitive; final appointment depends on availability of funds. Persons eligible for employment in Canada at the time of application will receive first consideration. Applications will be accepted until June 1, 1980 or until the position is filled; the appointment can begin as early as September 1, 1980. Direct a complete vitae, the names and addresses of at least three references, and samples of scholarly work (e.g., reprints or preprints) to Dr. T. Gary Waller, Chairman, Department of Psychology, University of Waterloo, Waterloo, Ontario, N2L 3G1.

UNIVERSITY OF SASKATCHEWAN. Department of Psychology. Two, one-year replacement positions are open in the Department of Psychology with a starting date of July 1, 1980. Applicants must have completed all the requirements for the Ph.D. prior to the starting date. The successful candidate for the first position would be expected to teach introductory psychology and senior undergraduate or graduate classes in their area of interest. Maximum salary for this position is at the floor of the Assistant rank. For the second position, teaching experience in social psychology is desirable. In addition, an ability to teach social research methods and program evaluation at the graduate level would be an asset. Salary range for this second position is $19,519 to $24,759 (1979-80 salary schedule). There is a good possibility that one of the positions will become tenurable in 1981-82. Applicants should send a curriculum vitae, an indication of teaching preferences, and the names of three referees to: K. McDowell, Head, Department of Psychology, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0.

DALHOUSIE UNIVERSITY. Department of Psychology. One year limited term faculty position to teach beginning and advanced perception, and to conduct original research. Candidates must have a minimum of two years postdoctoral experience, prior teaching experience, quality published research at the interface of neuroscience and behaviour, plus demonstrable expertise in quantitative methods, development, and temporal coding of behaviour in vertebrate species. Appointment is anticipated at the Assistant Professor level with a minimum salary of $17,750 per year. Actual salary and rank may be adjusted on the basis of qualifications and availability of funds. Please send curriculum vitae plus two letters of reference to John C. Fentress, Chairman of Psychology, Dalhousie University, Halifax, Nova Scotia, B3H 4J1. Deadline for receipt of applications is June 15, 1980.

UNIVERSITY OF NEW BRUNSWICK. Division of Social Science. Tenured position to be filled in the undergraduate Psychology program at the Saint John campus. Position will involve teaching and research in the social — cognitive areas. Ph.D. preferred. Appointment at assistant professor rank or above; salary negotiable within established guidelines. Commence July 1, 1980, if possible. Applications, with detailed curriculum vitae, supporting documentation, and three references to: R.E. Garland, Chairman, Division of Social Science, University of New Brunswick, P.O. Box 5050, Saint John, New Brunswick, Canada. E2L 4L5.

PUBLIC ADMINISTRATION

CARLETON UNIVERSITY. School of Public Administration. Applications are invited for a position at the senior Associate or full Professor level.* Qualifications: Ph.D. in Economics with extensive teaching and research experience in the applied economic analysis of public Policy. Preference will be given also to background in financial management and government/industry relations. Duties include research and teaching at graduate and undergraduate level. Applications should be sent to: Dr. G. Bruce Doern, Director, School of Public Administration, Carleton University, Ottawa, Ontario, K1S 5B6. Effective date of appointment: January 1, 1981 or July 1, 1981.

*Position subject to budgetary approval.

RELIGIOUS STUDIES

UNIVERSITY OF TORONTO. Department of Religious Studies. Two year term appointment (possibility of extension) at Assistant Professor rank in New Testament. Doctorate with specialization in New Testament. Demonstrated ability in undergraduate teaching is essential. Available, 1980-81 academic year. Application deadline, June 15, 1980. Send to Prof. L.J. Elmer, Chairman, Department of Religious Studies, University of Toronto, 110 Charles Street West, Toronto, Ontario, M5S 1A1.

UNIVERSITY OF ALBERTA. Department of Religious Studies. The University of Alberta, Department of Religious Studies requires a Historian of Religion with particular competence in Islamics for a one-year sabbatical replacement. Undergraduate teaching. Ph.D. preferred. Appointment begins September, 1980. Send resumé to: Dr. Earl Waugh, Chairman, Department of Religious Studies, University of Alberta, Edmonton, Alberta, Canada, T6G 2E5.

SOCIOLOGY

UNIVERSITY OF WESTERN ONTARIO. Department of Sociology. The Department requires an Assistant Professor with Ph.D. to commence July 1, 1980 for a three-year limited term. Qualifications: Ph.D. in Sociology, or completion by summer, 1980. Areas of specialization: Criminology, Corrections, Juvenile Delinquency. Salary: Dependent upon qualifications and experience. Forward application, including curriculum vitae and names of three referees to: Edward Grabb, Chairman, Recruitment Committee, Department of Sociology, University of Western Ontario, London, Ontario, N6A 5C2. NOTE: This appointment is subject to the availability of funds.

STATISTICS

UNIVERSITY OF WINNIPEG. Department of Statistics. The Department of Statistics, University of Winnipeg invites applications for a regular position in Statistics, to begin September 1, 1980. Duties involve the teaching of undergraduate courses in Statistics. A Ph.D. and teaching experience are preferred. Salary and rank will be according to qualifications and experience. Send curriculum vitae, and have three letters of reference sent to: Professor W.C. Campbell, Cheirman, Department of Mathematics and Statistics, University of Winnipeg, 515 Portage Avenue, Winnipeg, Manitoba, R3B 2E9.

THEATRE ARTS

CONCORDIA UNIVERSITY. Faculty of Fine Arts. Stege Lighting end Technicel Theetre Teecher — Theatre Arts Progremme. Duties: Teach 3 courses (18 credits) per academic year in the area of stage lighting and sound, beginning and advanced theatre technology. Design and/or supervise student designers of lighting and sound for all theatre productions. Work with the staff technical director and assistant in overseeing the technicel operations of the Theatre Programme. Programme: Comprising 10 full-time and 11 part-time faculty plus 3 full-time technical staff, the Theatre Arts Section serves approximately 100 major students enrolled in four BFA programmes including Scenography, Performance, Drama in Education, and Drama. It mounts 4-6 productions per year in a 380 seat counterweight, proscenium house and a black-box studio theatre. Qualifications: M.F.A or equivalent in Stage Lighting and Technical Theatre Production. (BFA considered) plus two or more years professional or university theatre work. Teaching experience highly desirable. A thorough knowledge of stage lighting design and technology, sound recording, electronic and electro-mechanical devices and technical drawing. Background in scenery and properties construction, scene painting and technical theatre management are also required. Ability to work in both French and English is desirable. Rank and Salary: Negotiable, depending on qualifications. Applications: Written application with full credentials including three letters of reference from persons familiar with the candidate's theatre work should be submitted to: Professor William A. Reznicek, Theatre Arts Section, Concordia University, 7141 Sherbrooke Street West, Montreal, Quebec, H4B 1R6. Position available starting June 1, 1980. Teaching duties begin September, 1980. Please do not send portfolios until requested.

CONCORDIA UNIVERSITY. Faculty of Fine Arts. Costume Designer-Teacher — Theatre Arts Programme. The Faculty's Division of Performing Arts invites applications for the post of Costume Designer-Teacher to take charge of the costume area and teach in the Theatre Arts Programme which offers B.F.A. degrees in Drama, Performance, Drama in Education, and Scenography. The Theatre Section presently comprises 10 full-time faculty members, including 4 in scenography, plus two full-time technical staff, a costumière, and paid student assistants. Qualifications: MFA degree or equivalent professional experience; design, pattern drafting, and cutting experience is required; teaching experience at university or equivalent institution is desirable; ability to work in French and English is desirable. Duties: Designing, cutting, and supervising the execution of costumes for 4 to 6 productions each academic year and/or supervising student designers; teaching courses in costume design and costume construction; interest and ability to teach in another area of theatre such as make-up, are highly desirable. The normal teaching load is three courses per year (18 credits). Production work is included as part of the teaching course load but a certain amount of work in production outside of the normal course load is expected. Rank and salary are negotiable depending upon qualifications and experience. Applications should be accompanied by a complete curriculum vitae and a dossier including slides or photographs of design work, (do not send original art work through the mail) and three letters of reference or the names of at least three persons who are familiar with the applicant's work and who would be prepared to provide references. Please address all inquiries and/or applications to: Professor William A. Reznicek, Division of Performing Arts, Theatre Arts Section, Concordia University, 7141 Sherbrooke Street West, Montreal, Quebec, H4B 1R6.

CONCORDIA UNIVERSITY. Faculty of Fine Arts. Theatre Arts Section. Assistant Technical Director. Duties: To assist the Technical Director in supervising the work of student technical crews, teaching proper techniques and procedures in preparing and operating faculty and student designed productions; to maintain theatre plant(s) and equipment; to supervise technical aspects of outside events booked into the theatres; to supervise paid student assistants working in the above areas. Qualifications: BFA in Technical Theatre Production (or equivalent). Training and experience in all aspects of technical theatre production, including theatre graphics, carpentry, stage rigging, lighting, etc. Knowledge of scenery shop and back-stage organization, maintenance and procedures. Ability to work in French and English desirable. Interested candidates are invited to submit applications in writing to the Personnel Office listed below: Concordia University, Personnel Office, 1420 Sherbrooke Street West, Suite A400, Montreal, Quebec, H3G 1K5. Starting Date: June 1, 1980.

CONCORDIA UNIVERSITY. Faculty of Fine Arts. Theatre Arts Section. Technical Director. Duties: Oversee the maintenance and operation of all theatre production facilities, equipment and materials stores, and technical theatre production work — supervising and instructing student crews, establishing and enforcing high standards of competence and safety. Supervise the work of full-time Assistant Technical Director and student assistants. Programme: Comprising 10 full-time and 11 part-time faculty, plus 3 full-time technical staff, the Theatre Arts Section serves approximately 110 major students enrolled in four BFA programmes including Scenography, Performance, Drama in Education, and Drama. Qualifications: M.F.A. or equivalent in Technical Theatre Production (BFA considered), plus 2 years professional or university theatre experience. Skill in technical drawing, scenery and properties construction, carpentry, welding, vacu-form, plastics molding, static structures and stage rigging. Some knowledge of stage lighting, scene painting, sound and stage management are also required. Ability to work in French and English is desirable. Interested candidates should submit applications in writing to the Personnel Office listed below: Concordia University, Personnel Office, 1420 Sherbrooke Street West, Suite A400, Montreal, Quebec, H3G 1K5. Starting Date: June 1, 1980.

VETERINARY MEDICINE

UNIVERSITY OF GUELPH. Department of Veterinery Microbiology end Immunology. The Department of Veterinary Microbiology and Immunology, University of Guelph, is seeking applicants for faculty position in the area of pathogenic bacteriology, to be available September 1, 1980. The duties include teaching at the undergraduate level in the DVM and B.Sc. programs, and at the graduate level, which will include the supervision of candidates for higher degrees in veterinary bacteriology, together with participation in the Department's research program on economically important bacterial diseases of food animals, with particular reference to mycoplasma infections. Applicants should have a DVM degree, and a Ph.D. in veterinary bacteriology, together with extensive relevant experience in teaching and research. The salary for this position, which is contractually limited to two years, is negotiable, and the position is subject to final budgetary approval. Enquiries and applications should be forwarded to Dr. J.B. Derbyshire, Chairman, Department of Veterinary Microbiology and Immunology, University of Guelph, Guelph, Ontario, N1G 2W1.

UNIVERSITY OF TORONTO. Faculty of Medicine. (1) University Department: Division of Laboratory Animal Science. (2) University Title: Staff Veterinarian. (3) Qualifications required: ACLAM or ACVP certified or eligible an asset. (4) Nature of Duties: Responsible for disease control, veterinary care, supervision of surgical facility and/or diagnostic laboratory. May have administrative responsibilities related to compliance of University's research and teaching programs with provincial legislation. May serve on University Animal Care Committee or subcommittees. (5) Salary: Negotiable. (6) Person to whom enquiries should be sent: Dr. L.R. Christensen, Director, Division of Laboratory Animal Science, Medical Science Building, University of Toronto, Ontario, M5S 1A8, Canada. (7) Effective Date of Appointment: July 1, 1980. (8) Closing Date for Receipt of Applications: June 1, 1980.

UNIVERSITY OF SASKATCHEWAN. Western College of Veterinary Medicine. Department of Veterinary Pathology. requires an Assistant/Associate Professor in Veterinary Clinical Pathology, effective July 1, 1980. Responsibilities include teaching classes in the undergraduate and graduate curricula as well as sharing in the service load of the laboratory. Participation in research and continuing education is expected. This is a tenurable position. Applicants must have a D.V.M. degree or equivalent and the successful applicant must, upon eppointment, become a member of the Saskatchewan Veterinary Medical Association. The Ph.D. degree and A.C.V.P. Board Certification or Board eligibility are essential. Rank and salary are commensurate with training and experience. Reply: Send curriculum vitae plus names of 3 references to Dr. J.H.L. Mills, Department of Veterinary Pathology, Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0, Canada. The position will be filled when a suitable applicant is found.

ZOOLOGY

UNIVERSITY OF BRITISH COLUMBIA. Department of Zoology. Postdoctoral position available on or after July 1, 1980 for research in nervous control of cardiovascular and respiratory responses to submergence in birds and mammals. Salary negotiable. Curriculum vitae and references should be sent to Dr. D.R. Jones, University of British Columbia, Department of Zoology, No. 2354-6270 University Boulevard, University Campus, Vancouver, British Columbia, V6T 2A9.

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ECONOMIC BENEFITS. BENEFICES ECONOMIQUES

Economic state of profession

Is the academic rewarded in this lifetime?

by David Balzarini

Academic salaries are often misunderstood by the public. Some of the confusion is produced by the different meaning of the word professor. Most taxpayers use the word professor to mean university teachers and are alarmed by average salaries in excess of $40,000. Most faculty members know the word professor and the associated average salary refer to a small fraction of senior academics. The typical young or middle aged academic earns a modest salary and hopes that she or he will eventually reach the level of remuneration which characterizes her or his senior colleagues. The average salary which the older academic receives should be viewed in light of the long period of training and the long gradual rise in earnings exhibited by the typical academic career pattern. It should be pointed out that the shape of the salary-age profile for academics is unusual; in other occupations and professions, peak earnings are reached much earlier in a career. The lifetime earnings of an individual depend on the shape of the salary-age earning pattern. The long period of low earnings during training and early career adversely affect the academic's lifetime income.

Expected lifetime earnings for various occupations are discussed in this article. (It is an updated version of an article prepared in 1975 and circulated within CAUT Committees and Workshops). Some readers may be reluctant to attempt to understand the graph. Therefore, instead of discussing the graph, the table of lifetime averages, and the table of discounted averages in the order which may be pleasing to the mathematically inclined, we shall start with the column of figures entitled "Expected Lifetime Average Income Per Year" at the right of the graph.

The expected lifetime average for the academic is obtained by averaging the earnings over a typical career. The data used are $4000 per year as an undergraduate, $7000 as a graduate student, $11000 as a post-doctoral research fellow, and the average salary-age profile data for faculty members in Canada. The estimates for earnings for undergraduates and graduate students are probably reasonable estimates.

The expected lifetime average for the carpenter is calculated by averaging income during the apprenticeship period (typically 4 years at 55%, 65%, 75% and 85% of journeyman's rates) with the income over the remainder of the career (at journeyman's rates). In this calculation the typical career chosen spans forty-six years as it does in all the other calculations. It is assumed that all the "typical persons" use one year during a lifetime for non-income producing purposes. We have chosen this year to be the first in all cases and have averaged over the forty-six years between ages nineteen and sixty-five.

The expected lifetime averages for the other occupations are calculated in a similar way by assuming a typical career. The salaries and wage rates are representative of conditions which exist in the metropolitan areas in which most Canadian universities are located. (Due to a time deadline, wage rates for supermarket cashiers were not obtained from areas other than B.C.). All data cover the calendar year January 1 to December 31 of 1979 or are adjusted to cover this period. (1)

The numbers in the table indicate that the average lifetime income of an academic is only slightly more than that of a schoolteacher or carpenter. The lawyer or accountant receives a large enough salary to compensate for the loss of income in early years but the academic does not. Another factor to be considered in these average lifetime earnings is that "early money is better than late money". From the graph it can be seen that for certain professions (school caretaker, cashier) their yearly income is almost constant during their lifetime. To achieve such a steady state, for other professions one could assume as an exercise that a professor (for example) could borrow money in the early part of his career and repay it (plus the interest) at a later stage when his earnings are higher. If we assume that the interest rate in real term is 3% (supposing no inflation at all), we arrive at the second column of figures below. Another way to look at it is that if a carpenter were to live on student wages during her early career and invest the remainder of her salary and later draw on these savings to supplement her income, she could easily keep pace in income with her friend who pursued an academic career. The discounted average lifetime earnings are even more revealing.

The tables of lifetime averages reveal information about expected income over whole careers. The graph shows cumulative average earnings as a function of age for the typical individuals. This is the income averaged up to a given age. The lifetime averages discussed previously are the cumulative average earnings at age 65. Note that each figure listed in the first column is at the level where the line for each occupation terminates on the graph.

The graph can be read as follows: for example if one considers the accountant at age 40, the figure arrived at by the curve is about $28,125. It means that if you average the earnings of a typical accountant from age 19 to age 40, you arrive at a value of $28,125. An interesting feature of the graph is the cross-over points where two curves cross. This gives the age at which the typical individual in one occupation catches-up in total income to the typical individual in another occupation. Note that the schoolteacher catches the cashier in total income at age 36 and the carpenter at age 50. The professor catches the cashier at age 44, the carpenter at age 56, and the teacher at age 60. Of course, as was illustrated by the table of discounted earnings, the professor never catches the carpenter or teacher if discounting is included. (A graph showing cumulative average earnings discounted at 3% versus age is available upon request).

All lifetime averages calculated above are based on present conditions. They are clearly not valid if salaries and salary-profiles for one occupation change in relation to salaries and salary-profiles of other occupations. It has been shown previously that relative salaries and salary-age profiles for academics are changing. (2) The results of these changes will be that lifetime incomes of the younger academic population will likely fall short of the expected averages calculated above.

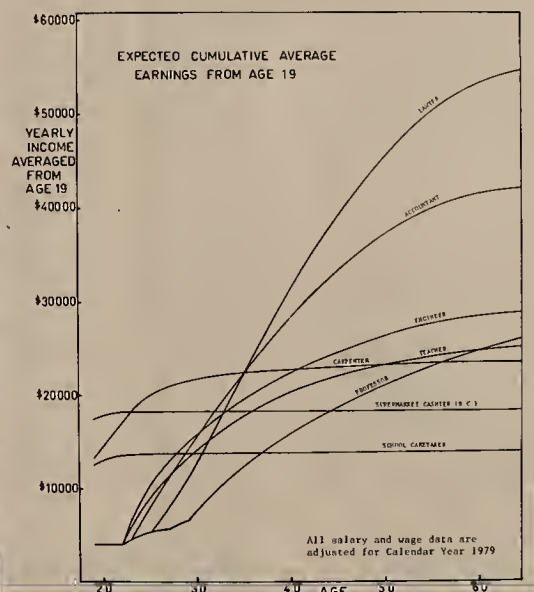
(1) In some cases salary data were available for an earlier period only. To adjust to calendar year 1979, it is assumed that the salary changes in these cases are the same as for the average Canadian worker. Another assumption is that the shape of the salary-age profile for a group does not change significantly from year to year. In some cases, the average salary for a group is known for a given year but not the profile. The assumption is made that the new profile can be obtained by scaling the old profile using the average salaries for the two time periods.

It should be pointed out that data for the accountant and lawyer are for accountants and lawyers in private practice (partners and employees), whereas the other data are for employees.

The data for the schoolteacher is for one with a master's degree or equivalent.

Sources for the data are Statistics Canada and various government publications, professional associations, and trade unions.

(2) CAUT *Bulletin*, Vol. 26, no. 5, (October 1979).



EXPECTED LIFETIME AVERAGE PER YEAR		EXPECTED AVERAGE IF DISCOUNTED AT 3%	
54516	LAWYER		
		44706	LAWYER
41880	ACCOUNTANT		
		35792	ACCOUNTANT
28847	ENGINEER		
25890	PROFESSOR	25717	ENGINEER
25176	SCHOOLTEACHER		
23510	CARPENTER	23039	CARPENTER
		22648	SCHOOLTEACHER
		21431	PROFESSOR
18358	SUPERMARKET CASHIER (BC)	18343	SUPERMARKET CASHIER (BC)
13983	SCHOOLCARETAKER	13956	SCHOOLCARETAKER

Fig. 1 the graph shows earnings averaged up to a given age for the typical individuals in various occupations. The cross-over point of two curves shows the age at which a typical individual in one occupation overtakes the typical individual in another occupation in total income. The first table at the right shows expected lifetime averages for the typical individuals and the second table gives expected lifetime averages including discounting at 3%.

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